Joint Biological Point Detection System (JBPDS)

Table of Contents

NOTES:

1. THIS DRAWING SHALL BE INTERPRETED IN ACCORDANCE WITH ASME Y14.100 WITH THE ADDITION OF APPENDICES B THROUGH E.
2. THE FOLLOWING ARE MANDATORY WHEN INDICATED BY ■
   - ☐ REMOVE BURRS ☐ BREAK SHARP EDGES .010 MAX
   - ☐ FILLETS R .010 MAX
   - ☐ 125 ALL OVER, EXCEPT AS NOTED
   - ☐ DIMENSIONS APPLY AFTER PLATING
   - ☐ TOLERANCES ON STOCK MATERIAL SIZES, SHALL BE AS SPECIFIED IN APPLICABLE SPECIFICATIONS.
   - ■ ANSI Y14.5–DATED 1994 APPLIES
   - ☐ FED–STD–H28 APPLIES
3. PICTORIAL NOT REQUIRED.
4. STORAGE SHALL BE 4°±2°C, AT RELATIVE HUMIDITY LESS THAN 40%.
5. UNLESS OTHERWISE INSTRUCTED, WHEN PACKAGING THIS PART FOR DELIVERY TO THE GOVERNMENT AS A CONTRACT LINE ITEM USE SPI P5–15–31917–10, P5–15–31917–20, P5–15–31917–30, P5–15–31917–40, P5–15–31917–50, OR P5–15–31917–60.

FOR QUALITY ASSURANCE PROVISIONS
SEE QAP 5–15–31917

REVISIONS			
LTR	DESCRIPTION	DATE (YR–MO–DA)	APPROVED
–	INITIAL RELEASE PER NOR 245–0017–0001, 07–11–28	08–01–17	SM

1 OR 7	2 OR 8	3 OR 9	4 OR 10	5 OR 11	6 OR 12

	QTY REQD –60	QTY REQD –50	QTY REQD –40	QTY REQD –30	QTY REQD –20	QTY REQD –10	DWG SIZE	DRAWING OR PART NO.	NOMENCLATURE OR MATERIAL	SPECIFICATION	ITEM NO.
#	8	–	–	–	–	–	D	79986–32011930–260	BOX ASSEMBLY, CARRIER ASSEMBLIES		12
◯	–	20	–	–	–	–	D	79986–32011930–250	BOX ASSEMBLY, CARRIER ASSEMBLIES		11
□	–	–	8	–	–	–	D	79986–32011930–250	BOX ASSEMBLY, CARRIER ASSEMBLIES		10
~	–	–	–	8	–	–	D	79986–32011930–240	BOX ASSEMBLY, CARRIER ASSEMBLIES		9
△	–	–	–	–	1	–	D	79986–32011930–240	BOX ASSEMBLY, CARRIER ASSEMBLIES		8
✳	–	–	–	–	–	8	D	79986–32011930–230	BOX ASSEMBLY, CARRIER ASSEMBLIES		7
#	8	–	–	–	–	–	E	5–15–19321–260	BOX ASSEMBLY, CARRIER ASSEMBLIES		6
◯	–	20	–	–	–	–	E	5–15–19321–250	BOX ASSEMBLY, CARRIER ASSEMBLIES		5
□	–	–	8	–	–	–	E	5–15–19321–250	BOX ASSEMBLY, CARRIER ASSEMBLIES		4
~	–	–	–	8	–	–	E	5–15–19321–240	BOX ASSEMBLY, CARRIER ASSEMBLIES		3
△	–	–	–	–	1	–	E	5–15–19321–240	BOX ASSEMBLY, CARRIER ASSEMBLIES		2
✳	–	–	–	–	–	8	E	5–15–19321–230	BOX ASSEMBLY, CARRIER ASSEMBLIES		1

PARTS LIST

– ALTERNATES
◯ – ALTERNATES
□ – ALTERNATES
~ – ALTERNATES
△ – ALTERNATES
✳ – ALTERNATES

APPLICATION	
DWG SIZE	NEXT ASSY

EQUIPMENT CODE NO.		
244	247	
245	283	
246		

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
2 PLACE DECIMALS ± .04
3 PLACE DECIMALS ± .010
ANGLES ± 0° 30′

MATERIAL

ORIGINAL DATE (YR–MO–DA): 08–01–17
DRAWN BY: MJH
CHECKER: SM
SUBMITTED: MIKE HOLT
DESIGN APPROVAL: ERIC STRUBA
DRAWING APPROVAL: SCOTT MILLS
CONTRACT NO.

U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010–5424

BOX ASSEMBLY, CARRIER

SIZE	CAGE CODE	DWG NO.
C	81361	5–15–31917

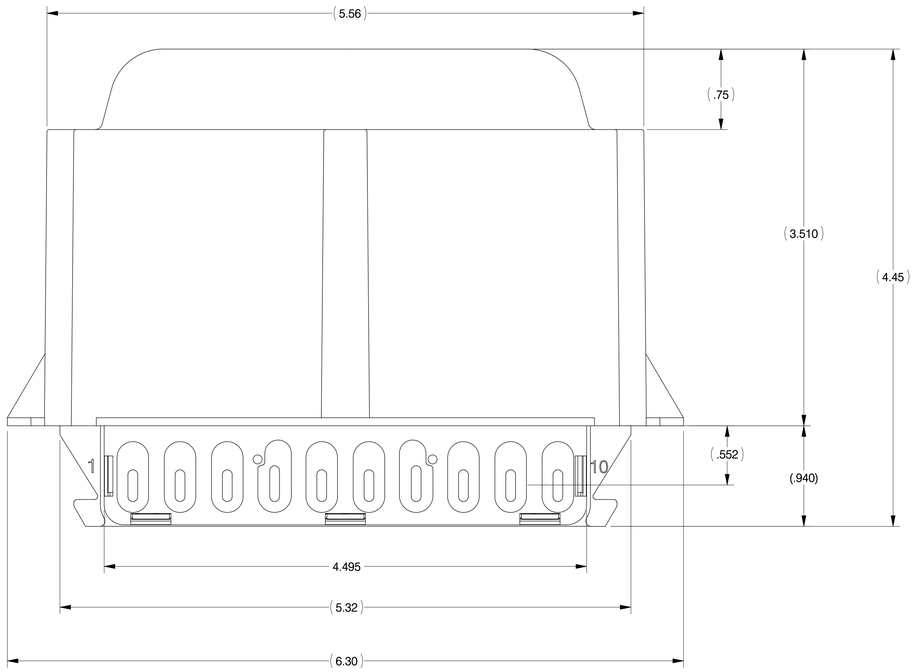
SCALE NONE SHEET

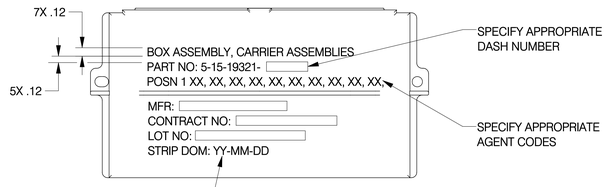
FOR QUALITY ASSURANCE PROVISONS
SEE QAP 5-15-19321

REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
—	INITIAL RELEASE PER NOR 245-0017-0002, 07-11-28	08-01-07	SM

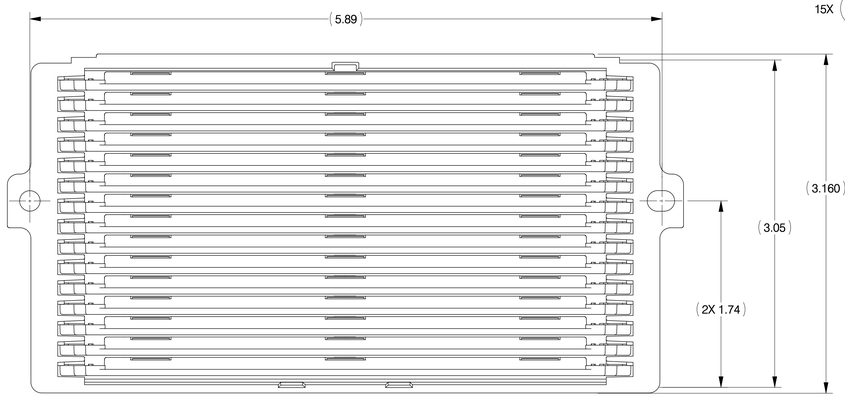
NOTES:

1. THIS DRAWING SHALL BE INTERPRETED IN ACCORDANCE WITH ASME Y14.100 WITH THE ADDITION OF APPENDICES B THROUGH E.
2. THE FOLLOWING ARE MANDATORY WHEN INDICATED BY ■
   - ☐ REMOVE BURRS ☐ BREAK SHARP EDGES .010 MAX
   - ☐ FILLETS R .010 MAX.
   - ☐ 125 ALL OVER, EXCEPT AS NOTED
   - ☐ DIMENSIONS APPLY AFTER PLATING
   - ☐ TOLERANCES ON STOCK MATERIAL SIZES, SHALL BE AS SPECIFIED IN APPLICABLE SPECIFICATIONS.
   - ■ ANSI Y14.5-DATED 1994 APPLIES
   - ☐ FED-STD-H28 APPLIES
3. ITEM 4 THRU 8 ASSEMBLIES SHALL BE FREE OF VISUAL CONTAMINATES, VISIBLE SURFACE IRREGULARITIES SUCH AS SMUDGES, SCRATCHES, AND FINGERPRINTS.
4. ASSEMBLE ITEMS 4 THRU 8, AS APPLICABLE, INTO ITEM 1 OR ITEM 2 ASSURING SNAP FIT.
5. STORAGE OF THE BOX ASSEMBLY SHALL BE 4 °±2 °C, AT RELATIVE HUMIDITY LESS THAN 40%.
6. MARK IAW-MIL-STD-130. LOCATE APPROXIMATELY AS SHOWN, USING ITEM 3. ALTERNATE MARKING METHOD SHALL BE APPROVED BY THE CONTRACTING OFFICER.
7. STRIP DATE OF MANUFACTURE (DOM) SHALL STATE THE EARLIEST STRIP DOM FOR THE ASSAY STRIP CARRIER ASSEMBLY, 5-15-19323, USED TO POPULATE THE BOX ASSEMBLY.
8. FOR ORDERING CONFIGURATIONS NOT SPECIFIED, CONTACT THE ADDRESS SHOWN IN THE DISTRIBUTION STATEMENT.
9. PACKAGING FOR CONFIGURATIONS NOT SPECIFIED HEREIN SHALL BE IN ACCORDANCE WITH CONTRACTUAL REQUIREMENTS, NOT SPI P5-15-31917.
10. CARRIER ASSEMBLY, ASSAY STRIP POSITIONS 3, 6, 9, 12 AND 15 SHALL BE OCCUPIED BY ITEM 7. ALL OTHER POSITIONS SHALL BE OCCUPIED BY ITEM 8.

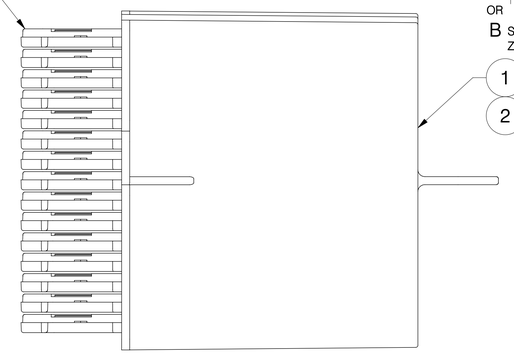




VIEW A-A
FOR CONFIGURATIONS -230, -240, AND -250 ONLY
SEE NOTE 6
SCALE 1/1



15X 4 THRU 8
SEE NOTE 4



A
OR
B SEE SHEET 2 ZONE E-7
1 FOR CONFIGURATIONS -230, -240 AND -250
2 FOR CONFIGURATION -260 ONLY

A
OR
B SEE SHEET 2 ZONE E-7

QTY REQD -260	QTY REQD -250	QTY REQD -240	QTY REQD -230	DWG SIZE	DRAWING OR PART NO.	NOMENCLATURE OR MATERIAL	SPECIFICATION	ITEM NO.
10	—	—	—	E	5-15-19323-270	CARRIER ASSEMBLY, ASSAY STRIP		8
5	—	—	—	E	5-15-19323-260	CARRIER ASSEMBLY, ASSAY STRIP		7
—	15	—	—	E	5-15-19323-250	CARRIER ASSEMBLY, ASSAY STRIP		6
—	—	15	—	E	5-15-19323-240	CARRIER ASSEMBLY, ASSAY STRIP		5
—	—	—	15	E	5-15-19323-230	CARRIER ASSEMBLY, ASSAY STRIP		4
A/R	A/R	A/R	A/R			INK, MARKING, STENCIL, OPAQUE, TYPE I OR IV, COLOR WHITE NO. 37875	A-A-208	3
1	—	1	1	E	5-15-19322-2	BOX, CARRIER, BLUE		2
—	1	—	—	E	5-15-19322-1	BOX, CARRIER, BLACK		1

PARTS LIST

APPLICATION	
DWG SIZE	NEXT ASSY
C	5-15-31917

EQUIPMENT CODE NO.

244	247	
245	283	
246		

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
2 PLACE DECIMALS ± .04
3 PLACE DECIMALS ± .010
ANGLES ± 0° 30'
MATERIAL

ORIGINAL DATE (YR-MO-DA)	08-01-07
DRAWN BY	MJC
CHECKER	SM
SUBMITTED	MIKE HOLT
DESIGN APPROVAL	ERIC STRUBA
DRAWING APPROVAL	SCOTT MILLS
CONTRACT NO.	

U.S. ARMY SOLDIER AND BIOLOGICAL CHEMICAL COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

BOX ASSEMBLY, CARRIER ASSEMBLIES

SIZE	CAGE CODE	DWG NO.
E	81361	5-15-19321

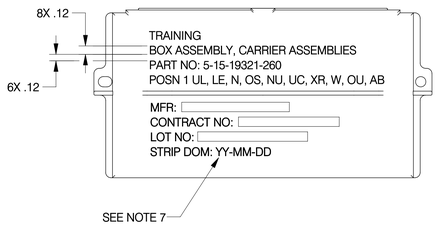
SCALE 2/1 SHEET 1 OF 2

NOTES:

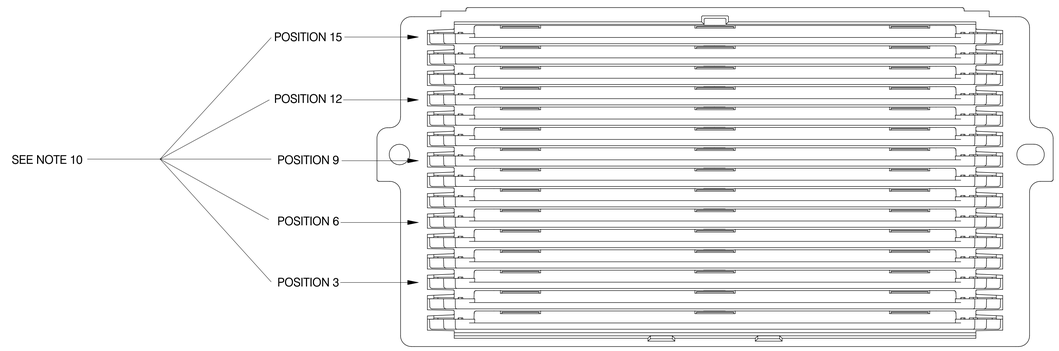
1. THIS DRAWING SHALL BE INTERPRETED IN ACCORDANCE WITH ASME Y14.100 WITH THE ADDITION OF APPENDICES B THROUGH E.
2. THE FOLLOWING ARE MANDATORY WHEN INDICATED BY ■
   - ☐ REMOVE BURRS ☐ BREAK SHARP EDGES .010 MAX
   - ☐ FILLETS R .010 MAX.
   - ☐ 125 ALL OVER, EXCEPT AS NOTED
   - ☐ DIMENSIONS APPLY AFTER PLATING
   - ☐ TOLERANCES ON STOCK MATERIAL SIZES, SHALL BE AS SPECIFIED IN APPLICABLE SPECIFICATIONS.
   - ■ ANSI Y14.5-DATED 1994 APPLIES
   - ☐ FED-STD-H28 APPLIES

REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
—	INITIAL RELEASE PER NOR 245-0017-0002, 07-11-28	08-01-07	SM

FOR QUALITY ASSURANCE PROVISONS
SEE QAP 5-15-19321



VIEW B-B
FOR CONFIGURATION -260 ONLY
SEE NOTE 6
SCALE 1/1



FOR CONFIGURATION -260 ONLY
SEE NOTE 10

DISTRIBUTION STATEMENT D. DISTRIBUTION AUTHORIZED TO THE DEPARTMENT OF DEFENSE AND U.S. DOD CONTRACTORS ONLY; CRITICAL TECHNOLOGY; DETERMINATION MADE 07-11-28. OTHER REQUESTS SHALL BE REFERRED TO: DEPARTMENT OF THE ARMY, JPEO FOR CHEMICAL BIOLOGICAL DEFENSE, OFFICE OF JPM FOR BIOLOGICAL DEFENSE SYSTEMS, ATTN: SFAE-CBD-BD-BDS, ABERDEEN PROVING GROUND, MD 21010-5424.

DESTRUCTION NOTICE - DESTROY BY ANY METHOD THAT WILL PREVENT DISCLOSURE OF CONTENTS OR RECONSTRUCTION OF THE DOCUMENT.

WARNING - THIS DOCUMENT CONTAINS TECHNICAL DATA WHOSE EXPORT IS RESTRICTED BY THE ARMS EXPORT CONTROL ACT (TITLE 22, U.S.C., SEC 2751, et seq.) OR THE EXPORT ADMINISTRATION ACT OF 1979, AS AMENDED, TITLE 50, U.S.C., APP. 2401 et seq. VIOLATIONS OF THESE EXPORT LAWS ARE SUBJECT TO SEVERE CRIMINAL PENALTIES. DISSEMINATE IN ACCORDANCE WITH PROVISIONS OF DOD DIRECTIVE 5230.25.

QTY REQD	DWG SIZE	DRAWING OR PART NO.	NOMENCLATURE OR MATERIAL	SPECIFICATION	ITEM NO.

PARTS LIST

APPLICATION	
DWG SIZE	NEXT ASSY
C	5-15-31917

EQUIPMENT CODE NO.

244	247	
245	283	
246		

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
2 PLACE DECIMALS ± .04
3 PLACE DECIMALS ± .010
ANGLES ± 0° 30'

MATERIAL

ORIGINAL DATE (YR-MO-DA)	08-01-07
DRAWN BY	MJC
CHECKER	SM
SUBMITTED	MIKE HOLT
DESIGN APPROVAL	ERIC STRUBA
DRAWING APPROVAL	SCOTT MILLS
CONTRACT NO.	

U.S. ARMY SOLDIER AND BIOLOGICAL CHEMICAL COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

BOX ASSEMBLY, CARRIER ASSEMBLIES

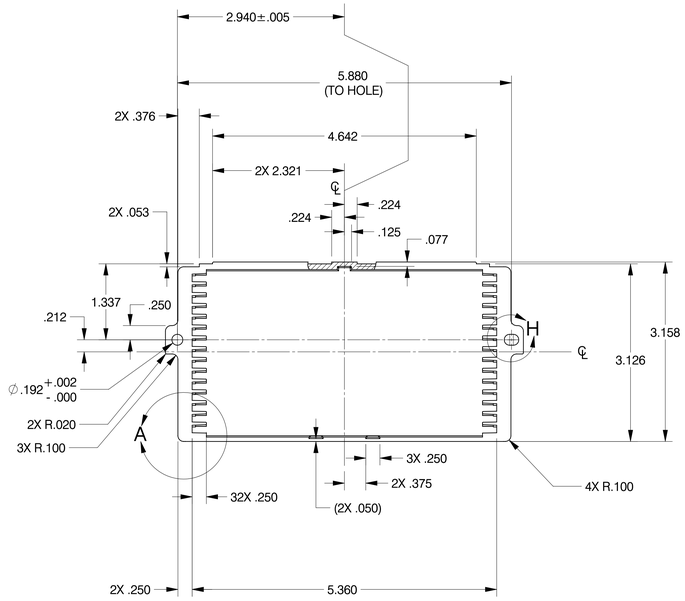
SIZE	CAGE CODE	DWG NO.
E	81361	5-15-19321

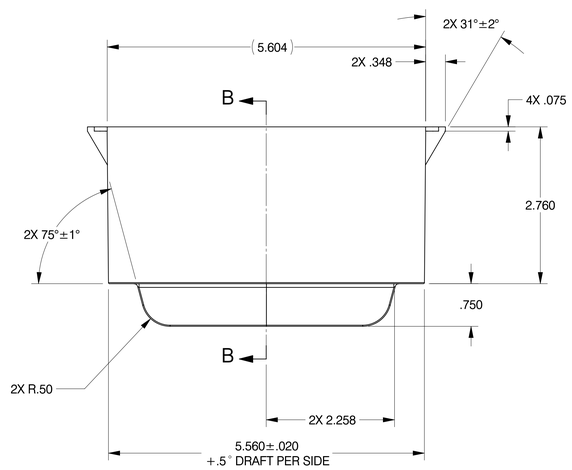
SCALE 2/1 SHEET 2 OF 2

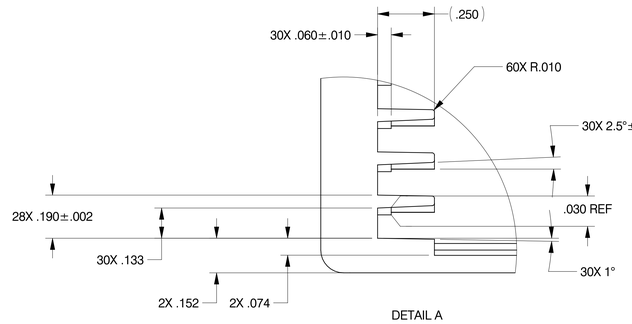
FOR QUALITY ASSURANCE PROVISIONS
SEE QAP 5-15-19322

REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
—	INITIAL RELEASE PER NOR 245-0017-0003, 07-11-28	08-01-07	SM

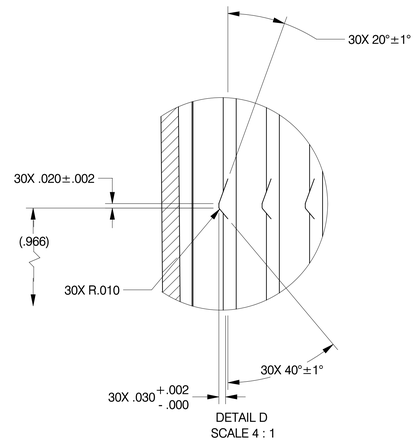
NOTES:
1. THIS DRAWING SHALL BE INTERPRETED IN ACCORDANCE WITH ASME Y14.100 WITH THE ADDITION OF APPENDICES B THROUGH E.
2. THE FOLLOWING ARE MANDATORY WHEN INDICATED BY ■
   - ☐ REMOVE BURRS ☐ BREAK SHARP EDGES .010 MAX
   - ☐ FILLETS R .010 MAX.
   - ☐ 125 ALL OVER, EXCEPT AS NOTED
   - ☐ DIMENSIONS APPLY AFTER PLATING
   - ☐ TOLERANCES ON STOCK MATERIAL SIZES, SHALL BE AS SPECIFIED IN APPLICABLE SPECIFICATIONS.
   - ■ ANSI Y14.5-DATED 1994 APPLIES
   - ☐ FED-STD-H28 APPLIES
3. FLAT SURFACES TO HAVE FLATNESS TOLERANCE OF .005 IN. AND NOT TO EXCEED .020 IN. OVER ENTIRE LENGTH OF PART.
4. NOMINAL WALL THICKNESS OF .100 IN. UNLESS OTHERWISE SPECIFIED.
5. DRAFT ALL SURFACES 0.5° PER SIDE OF PARTING LINE UNLESS OTHERWISE NOTED.
6. REMOVE ALL FLASH.
7. UNSPECIFIED RADII .02±.01.



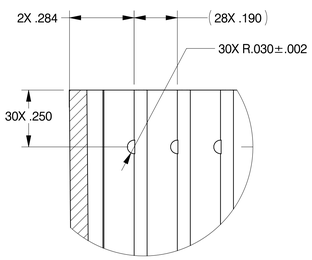




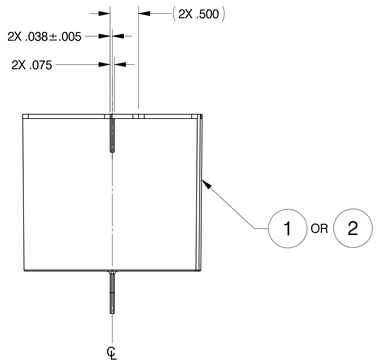
DETAIL A
SCALE 4 : 1

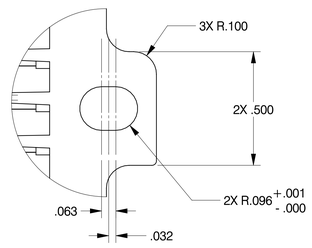


DETAIL D
SCALE 4 : 1

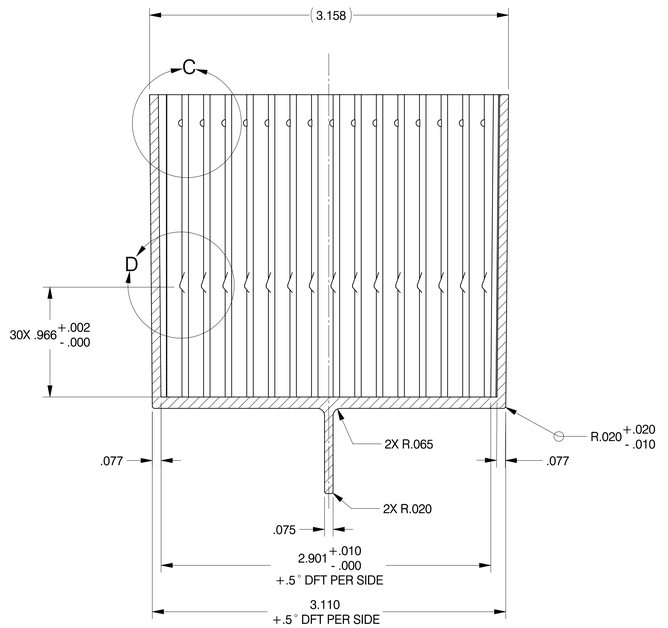


DETAIL C
SCALE 4 : 1





DETAIL H
SCALE 4 : 1



SECTION B-B
SCALE 2 : 1

QTY REQD	DWG SIZE	DRAWING OR PART NO.	NOMENCLATURE OR MATERIAL	SPECIFICATION	ITEM NO.
A/R		-2	LEXAN HF-1140, BLUE #25230	FED-STD-595	1
A/R		-1	LEXAN HF-1140-701, BLACK		1

PARTS LIST

APPLICATION	
DWG SIZE	NEXT ASSY
E	5-15-19321

EQUIPMENT CODE NO.		
244	247	
245	283	
246		

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
2 PLACE DECIMALS ± .04
3 PLACE DECIMALS ± .010
ANGLES ± 0° 30'

MATERIAL

ORIGINAL DATE (YR-MO-DA)	08-01-07
DRAWN BY	DFW
CHECKER	SM
SUBMITTED	MIKE HOLT
DESIGN APPROVAL	ERIC STRUBA
DRAWING APPROVAL	SCOTT MILLS
CONTRACT NO.	

U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

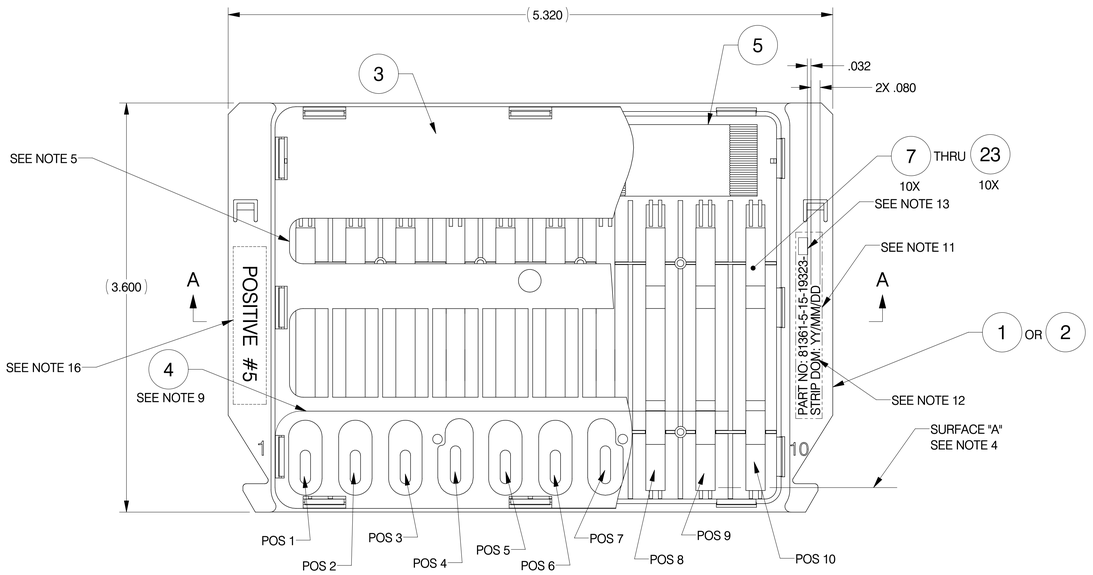
BOX, CARRIER

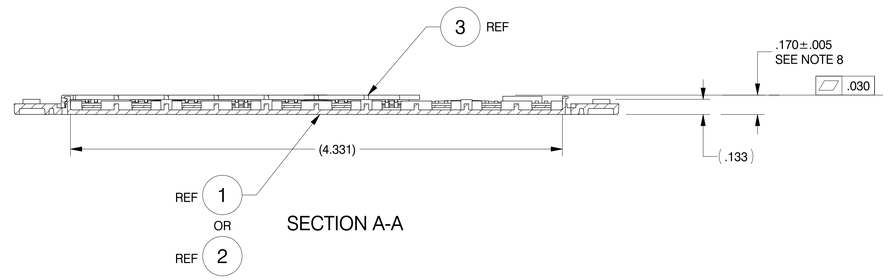
SIZE	CAGE CODE	DWG NO.
E	81361	5-15-19322

SCALE 2/1 SHEET

REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
—	INITIAL RELEASE PER NOR 245-0017-0004, 07-11-28	08-01-07	SM

NOTES:
1. THIS DRAWING SHALL BE INTERPRETED IN ACCORDANCE WITH ASME Y14.100 WITH THE ADDITION OF APPENDICES B THROUGH E.
2. THE FOLLOWING ARE MANDATORY WHEN INDICATED BY ■
   - ☐ REMOVE BURRS ☐ BREAK SHARP EDGES .010 MAX
   - ☐ FILLETS R .010 MAX.
   - ☐ 125 ALL OVER, EXCEPT AS NOTED
   - ☐ DIMENSIONS APPLY AFTER PLATING
   - ☐ TOLERANCES ON STOCK MATERIAL SIZES, SHALL BE AS SPECIFIED IN APPLICABLE SPECIFICATIONS.
   - ■ ANSI Y14.5-DATED 1994 APPLIES
   - ☐ FED-STD-H28 APPLIES
3. ASSEMBLY INTERIOR AND EXTERIOR SHALL BE FREE OF VISUAL CONTAMINATES, VISIBLE SURFACE IRREGULARITIES SUCH AS SMUDGES, SCRATCHES, AND FINGERPRINTS, AND DAMAGE TO PLASTIC-TO-STOP INTERFACE.
4. ASSEMBLE ITEM 7 THRU 23 IN POSITIONS SHOWN IN TABLE I, ASSURING CONTACT WITH SURFACE A.
5. ASSAY STRIP CODE DESCRIPTION SHALL BE VISIBLE THROUGH SMALL WINDOW.
6. ASSEMBLE ITEM 5 IN POSITION SHOWN. MOISTURE INDICATOR WINDOW SHALL BE VISIBLE THROUGH ITEM 3.
7. SNAP FIT ITEM 3 TO ITEM 1 FOR CONFIGURATION -250, AND ITEM 3 TO ITEM 2 FOR CONFIGURATIONS -230, -240 -260 AND -270.
8. DIMENSION INDICATED IS AFTER SNAP FITTING AND PRIOR TO ASSEMBLY OF ITEM 4.
9. AFTER SNAP FITTING, EDGES OF ITEM 4 SHALL BE WITHIN ±.015 OF PERIMETER OF ITEM 3. ITEM 4 SHALL BE FREE OF BUBBLES, CREASES AND WRINKLES.
10. FOLLOWING CONFORMANCE TESTING, CARRIER ASSEMBLIES SHALL BE SEALED IN A DESSICATED PACKAGE WITH RH INDICATOR. COMPLETED CARRIER ASSEMBLIES SHALL NOT BE EXPOSED TO RELATIVE HUMIDITY GREATER THAN 40% FOR MORE THAN 8 HOURS DURING ANY SUBSEQUENT MANUFACTURING ASSEMBLY PROCESS. STORAGE OF THE CARRIER ASSEMBLIES SHALL BE AT 4±2 DEGREES CELCIUS, AT RELATIVE HUMIDITY <40%.
11. MARKING SHALL BE APPROXIMATELY AS SHOWN, USING ITEM 6.
12. STRIP DATE OF MANUFACTURE SHALL STATE THE EARLIEST DATE OF MANUFACTURE FOR THE ASSAY STRIPS USED, SEE 5-15-19324.
13. ADD APPROPRIATE DASH NUMBER FROM TABLE I.
14. FOR ORDERING CONFIGURATIONS NOT SPECIFIED, CONTACT THE ADDRESS SHOWN IN THE DISTRIBUTION STATEMENT.
15. FLAT SURFACES TO HAVE FLATNESS TOLERANCE OF .010/IN. AND NOT TO EXCEED .030/IN. OVER ENTIRE LENGTH OF PART.
16. "POSITIVE #5" MARKING SHALL ONLY BE ON CONFIGURATION -260 AND APPROXIMATELY AS SHOWN USING ITEM 5.





SECTION A-A

TABLE 1

DASH NO.	STRIP AND CODE DESCRIPTION (SEE NOTE 14)									
	POS 1	POS 2	POS 3	POS 4	POS 5	POS 6	POS 7	POS 8	POS 9	POS 10
-230	-015, TP	-016, TN	-015, TP	-016, TN	———	———	———	———	———	———
-240	-001, BG	-004, OV	———	———	———	———	———	———	———	———
-250	-009, UL	-011, LE	-008, N	-017, OS	-014, NU	-006, UC	-005, XR	-007, W	-013, OU	-010, AB
-260	-016, TN	-016, TN	-016, TN	-016, TN	-015, TP	-016, TN	-016, TN	-016, TN	-016, TN	-016, TN
-270	-016, TN	-016, TN	-016, TN	-016, TN	-016, TN	-016, TN	-016, TN	-016, TN	-016, TN	-016, TN

QTY REQD -270	QTY REQD -260	QTY REQD -250	QTY REQD -240	QTY REQD -230	DWG SIZE	DRAWING OR PART NO.	NOMENCLATURE OR MATERIAL	SPECIFICATION	ITEM NO.
—	—	1	—	—	D	5-15-19324-017	ASSAY STRIP ASSEMBLY, OS		23
10	9	—	—	2	D	5-15-19324-016	ASSAY STRIP ASSEMBLY, TN		22
—	1	—	—	2	D	5-15-19324-015	ASSAY STRIP ASSEMBLY, TP		21
—	—	1	—	—	D	5-15-19324-014	ASSAY STRIP ASSEMBLY, NU		20
—	—	1	—	—	D	5-15-19324-013	ASSAY STRIP ASSEMBLY, OU		19
—	—	—	—	—	D	5-15-19324-012	ASSAY STRIP ASSEMBLY, EV		18
—	—	1	—	—	D	5-15-19324-011	ASSAY STRIP ASSEMBLY, LE		17
—	—	1	—	—	D	5-15-19324-010	ASSAY STRIP ASSEMBLY, AB		16
—	—	1	—	—	D	5-15-19324-009	ASSAY STRIP ASSEMBLY, UL		15
—	—	1	—	—	D	5-15-19324-008	ASSAY STRIP ASSEMBLY, N		14
—	—	1	—	—	D	5-15-19324-007	ASSAY STRIP ASSEMBLY, W		13
—	—	1	—	—	D	5-15-19324-006	ASSAY STRIP ASSEMBLY, UC		12
—	—	1	—	—	D	5-15-19324-005	ASSAY STRIP ASSEMBLY, XR		11
—	—	—	1	—	D	5-15-19324-004	ASSAY STRIP ASSEMBLY, OV		10
—	—	—	—	—	D	5-15-19324-003	ASSAY STRIP ASSEMBLY, MS		9
—	—	—	—	—	D	5-15-19324-002	ASSAY STRIP ASSEMBLY, EH		8
—	—	—	1	—	D	5-15-19324-001	ASSAY STRIP ASSEMBLY, BG		7
A/R	A/R	A/R	A/R	A/R			INK, MARKING, STENCIL, OPAQUE, TYPE I OR IV, COLOR WHITE NO. 37875	A-A-208	6
1	1	1	1	1	C	5-15-19328	DESSICANT STRIP, VID		5
1	1	1	1	1	C	5-15-19326	MEMBRANE, CARRIER SAMPLE WELL, VID		4
1	1	1	1	1	E	5-15-19325	TOP, ASSAY STRIP CARRIER		3
1	1	—	1	1	E	5-15-19327-2	BOTTOM, ASSAY STRIP CARRIER - BLUE		2
—	—	1	—	—	E	5-15-19327-1	BOTTOM, ASSAY STRIP CARRIER - BLACK		1

PARTS LIST

APPLICATION	
DWG SIZE	NEXT ASSY
E	5-15-19321

EQUIPMENT CODE NO.: 244, 247, 245, 283, 246

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
2 PLACE DECIMALS ± .04
3 PLACE DECIMALS ± .010
ANGLES ± 0° 30'

MATERIAL

ORIGINAL DATE (YR-MO-DA): 08-01-07
DRAWN BY: MJC
CHECKER: SM
SUBMITTED: MIKE HOLT
DESIGN APPROVAL: ERIC STRUBA
DRAWING APPROVAL: SCOTT MILLS
CONTRACT NO.

U.S. ARMY SOLDIER AND BIOLOGICAL CHEMICAL COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

CARRIER ASSEMBLY, ASSAY STRIP

SIZE	CAGE CODE	DWG NO.
E	81361	5-15-19323

SCALE 2/1 SHEET

NOTES:

1. THIS DRAWING SHALL BE INTERPRETED IN ACCORDANCE WITH ASME Y14.100 WITH THE ADDITION OF APPENDICES B THROUGH E.
2. THE FOLLOWING ARE MANDATORY WHEN INDICATED BY ■
   - ☐ REMOVE BURRS ☐ BREAK SHARP EDGES .010 MAX
   - ☐ FILLETS R .010 MAX.
   - ☐ 125 ALL OVER, EXCEPT AS NOTED
   - ☐ DIMENSIONS APPLY AFTER PLATING
   - ☐ TOLERANCES ON STOCK MATERIAL SIZES, SHALL BE AS SPECIFIED IN APPLICABLE SPECIFICATIONS.
   - ■ ANSI Y14.5-DATED 1994 APPLIES
   - ☐ FED-STD-H28 APPLIES
3. IDENTIFICATION OF THE SUGGESTED ITEMS HEREON IS NOT TO BE CONSTRUED AS A GUARANTEE OF PRESENT OR CONTINUED AVAILABILITY.
4. ASSAY STRIPS TO BE MANUFACTURED AND TESTED IN A CONTROLLED ENVIRONMENT WITH <40% RELATIVE HUMIDITY. FOLLOWING CONFORMANCE TESTING, PARTS SHALL BE SEALED IN A DESICCATED PACKAGE WITH RH INDICATOR. COMPLETED ASSAY STRIPS SHALL NOT BE EXPOSED TO RELATIVE HUMIDITY GREATER THAN 40% FOR MORE THAN 8 HOURS DURING ANY SUBSEQUENT MANUFACTURING ASSEMBLY PROCESS. STORAGE OF THE ASSAY STRIPS (AND ALL SUBSEQUENT PARTS CONTAINING ASSAY STRIPS) SHALL BE AT 4 ±2 DEGREES CELCIUS, AT RELATIVE HUMIDITY <40%.
5. ASSAY STRIP CODE DESCRIPTION TO BE VISIBLE ON WICKING PAD. ONE COMPLETE CODE DESCRIPTION SHALL BE LEGIBLE AFTER CUTTING TO FINISHED WIDTH.
6. PACKAGING FOR ASSAY STRIPS SHALL IDENTIFY MANUFACTURER, CAGE CODE, LOT NUMBER, CODE DESCRIPTION, AND DATE OF MANUFACTURE.
7. CODE DESCRIPTIONS DEFINE SPECIFIC AGENTS OF BIOLOGICAL ORIGIN (ABOs), ABO SIMULANTS, AND SIMULATED ABO IDENTIFICATION LEVELS.

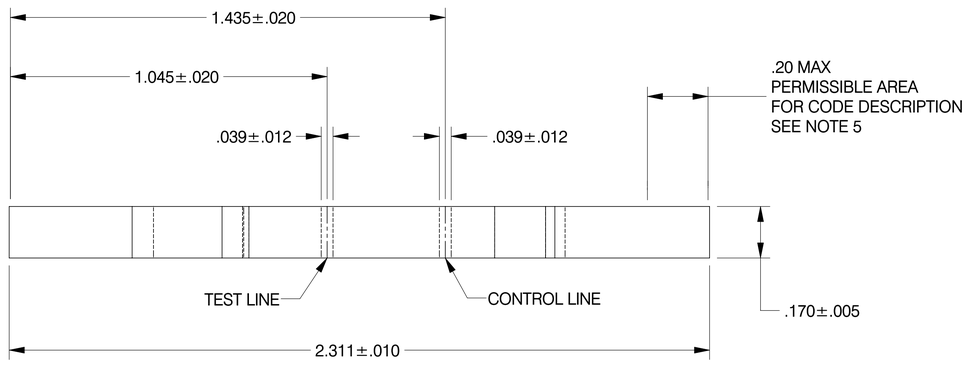
   CONTACT THE FOLLOWING ADDRESS FOR SPECIFIC DETAILS REGARDING CODE DESCRIPTIONS.

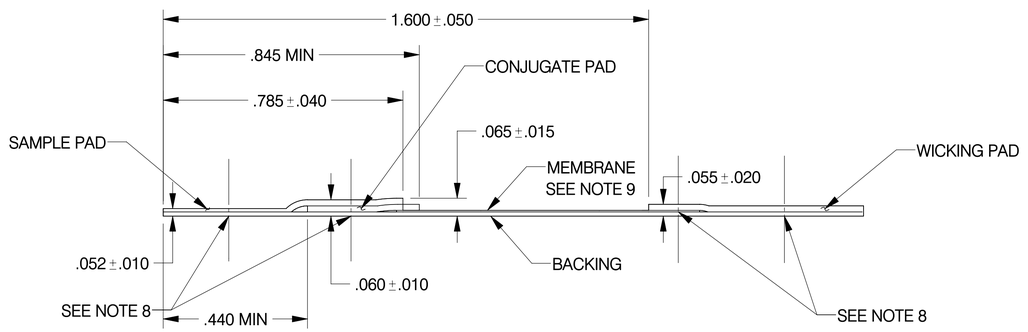
   JOINT PROGRAM OFFICE FOR BIOLOGICAL DEFENSE
   CRITICAL REAGENTS PROGRAM
   5203 LEESBURG PIKE
   SKYLINE #2, SUITE 1609
   FALLS CHURCH, VA 22041
   703-681-9607.
8. THESE AREAS MUST MATE WITH HOLD DOWN LOCATIONS ON 5-15-19325. AFTER ASSEMBLY, ASSAY STRIPS SHALL MEET THE PERFORMANCE REQUIREMENTS STATED IN QAP 5-15-19321
9. OPTICAL DENSITY OF BASE MEMBRANE MATERIAL SHALL NOT EXCEED 0.068 OPTICAL DENSITY AS DEFINED BY: ANSI/ISO 5-3-1995 & 5-4-1995. ANSI/NAPM IT2. 17-1995 & IT2.18-1996.
10. STRIPS SHALL BE FREE FROM VISUAL CONTAMINANTS, VISIBLE SURFACE IRREGULARITIES, AND STRAY MARKS AS DESCIRBED BELOW:
    DARK SHADED - .003 DIAMETER MAX
    LIGHT SHADED - .010 DIAMETER MAX
11. THE STRIPS SHALL BE SUPPLIED IN A MODULAR FORM TO THE FIELD. WHEN INOCULATED WITH 115 ± 10μL (MICRO-LITERS) OF BUFFER CONTAINING SAMPLE, THE ASSAY SHALL PRODUCE A POSITIVE TEST LINE WITH AN INTENSITY GREATER THAN OR EQUAL TO .076 OPTICAL DENSITY (OPTICAL DENSITY IS DEFINED BY ANSI/ISO 5-4-1995, ANSI/NAPM IT2.1) (~30 CAMBER UNITS). THE ASSAY STRIP SHALL DEVELOP A POSITIVE TEST LINE WHEN EXPOSED TO THE SAMPLE CONCENTRATIONS IN THIS CHART.

    WHEN INOCULATED WITH 115 ± 10μL (MICRO-LITERS) OF FLUID, THE ASSAY SHALL PRODUCE A CONTROL LINE WITH AN INTENSITY GREATER THAN OR EQUAL TO .175 OPTICAL DENSITY (~200 CAMBER UNITS).

SUGGESTED SOURCES OF SUPPLY			
CONTROL NUMBER	SUPPLIER DATA		
	CAGE CODE	PART NUMBER	NAME AND ADDRESS
5-15-19324	NONE	NONE	SA SCIENTIFIC, INC. 4919 GOLDEN QUAIL SAN ANTONIO, TX 78240

FOR QUALITY ASSURANCE PROVISIONS
SEE QAP5-15-19321





ASSY STRIP	CODE DESCRIPTION SEE NOTE 5 AND 7
5-15-19324-001	BG
5-15-19324-002	EH
5-15-19324-003	MS
5-15-19324-004	OV
5-15-19324-005	XR
5-15-19324-006	UC
5-15-19324-007	W
5-15-19324-008	N
5-15-19324-009	UL
5-15-19324-010	AB
5-15-19324-011	LE
5-15-19324-012	EV
5-15-19324-013	OU
5-15-19324-014	NU
5-15-19324-015	TP (TRAINER POSITIVE)
5-15-19324-016	TN (TRAINER NEGATIVE)
5-15-19324-017	OS

REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
-	INITIAL RELEASE PER NOR 245-0024-001, DATED 04-12-07	04-12-15	SM
A	NOR 245-0017-0022, 07-11-28	08-01-24	SM

VENDOR ITEM DRAWING

QTY REQD	DWG SIZE	DRAWING OR PART NO.	NOMENCLATURE OR MATERIAL	SPECIFICATION	ITEM NO.
PARTS LIST					

APPLICATION	
DWG SIZE	NEXT ASSY
E	5-15-19323

EQUIPMENT CODE NO.		
244	247	
245	283	
246		

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
2 PLACE DECIMALS ± .04
3 PLACE DECIMALS ± .010
ANGLES ± 0° 30'
MATERIAL

ORIGINAL DATE (YR-MO-DA): 04-12-15
DRAWN BY: MJC
CHECKER: SM
SUBMITTED: MIKE HOLT
DESIGN APPROVAL: ERIC STRUBA
DRAWING APPROVAL: M. SCOTT MILLS
CONTRACT NO.

U.S. ARMY SOLDIER AND BIOLOGICAL CHEMICAL COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

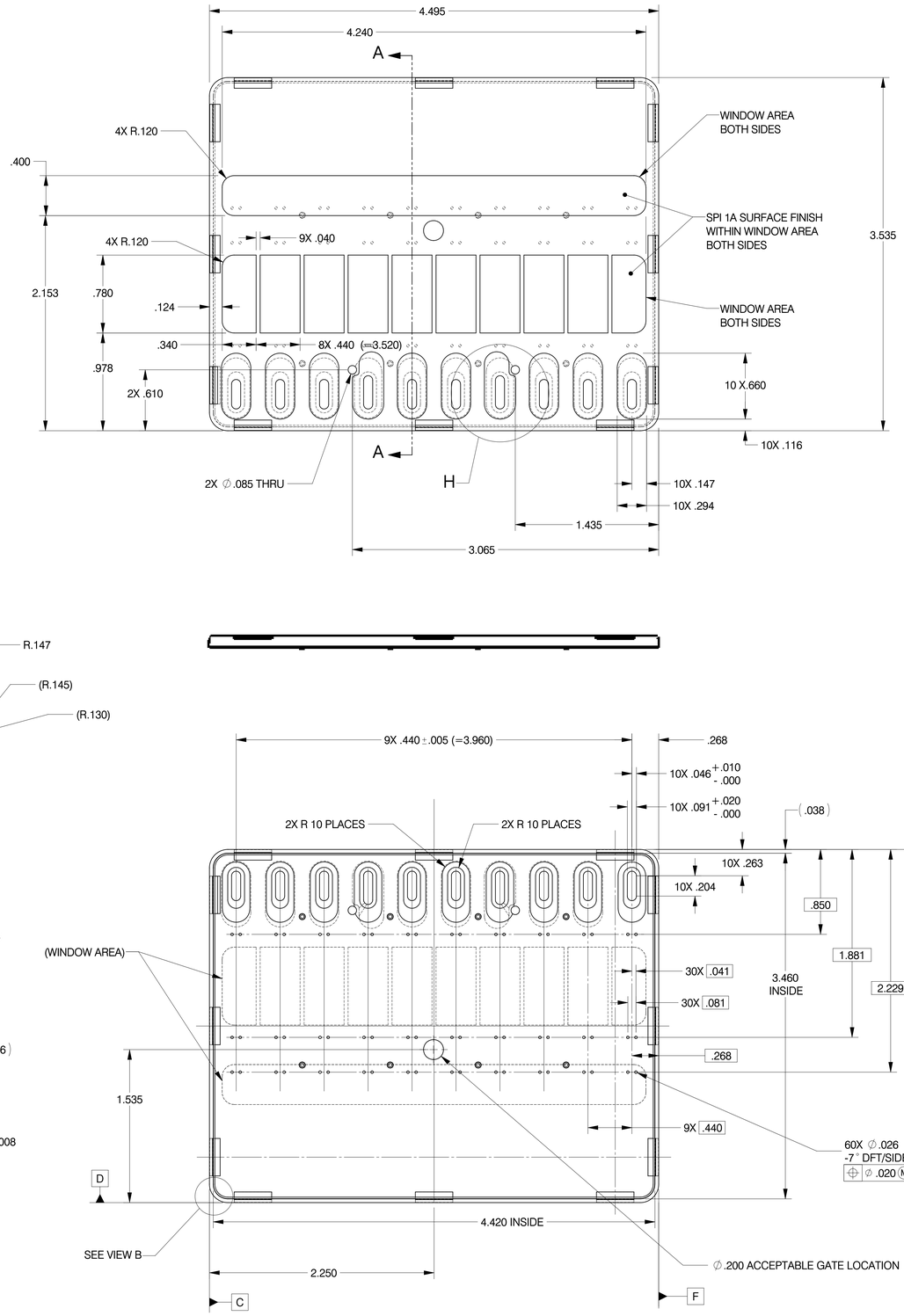
ASSAY STRIP ASSEMBLY

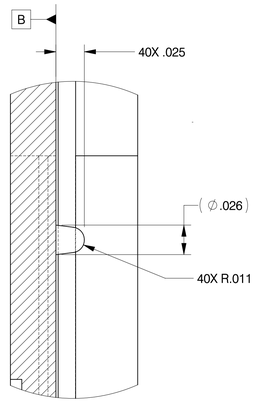
SIZE	CAGE CODE	DWG NO.
D	81361	5-15-19324

SCALE 4/1 SHEET 1 OF 2

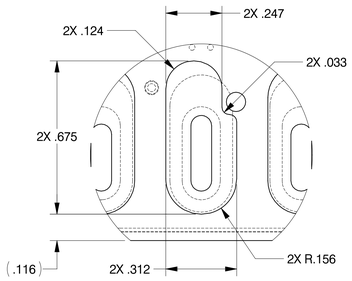
NOTES:
1. THIS DRAWING SHALL BE INTERPRETED IN ACCORDANCE WITH ASME Y14.100 WITH THE ADDITION OF APPENDICES B THROUGH E.
2. THE FOLLOWING ARE MANDATORY WHEN INDICATED BY ■
   - ☐ REMOVE BURRS ☐ BREAK SHARP EDGES .010 MAX
   - ☐ FILLETS R .010 MAX.
   - ☐ 125 ALL OVER, EXCEPT AS NOTED
   - ☐ DIMENSIONS APPLY AFTER PLATING
   - ☐ TOLERANCES ON STOCK MATERIAL SIZES, SHALL BE AS SPECIFIED IN APPLICABLE SPECIFICATIONS.
   - ■ ANSI Y14.5-DATED 1994 APPLIES
   - ☐ FED-STD-H28 APPLIES
3. REMOVE ALL FLASH.
4. MATERIAL: LEXAN HF 1140-112
   COLOR CLEAR
5. BAG BULK QUANITY OF PART IN ACCORDANCE WITH MIL-STD-2073-1. TAG BAG USING .12 IN. HIGH CHARACTERS IN ACCORDANCE WITH MIL-STD-130 USING BLACK INK PER A-A-208.
6. HOLD DOWN TO AREAS TO INTERFACE WITH DWG NO. 5-15-19324.
7. SURFACE FINISH SHALL BE SPI D3 UNLESS OTHERWISE SPECIFIED.
8. SNAP FIT LOCKING SLOTS AND PRESS FIT PINS ARE DIMENSIONED ON SHEET 2 OF 2..

REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
—	INITIAL RELEASE PER NOR 245-0017-0005, 07-11-28	08-01-07	SM

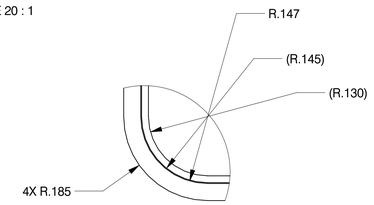




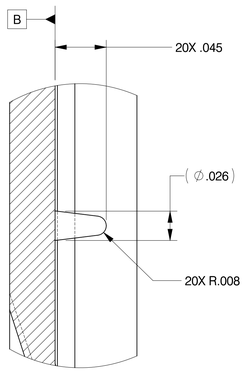
VIEW D
SCALE 20 : 1



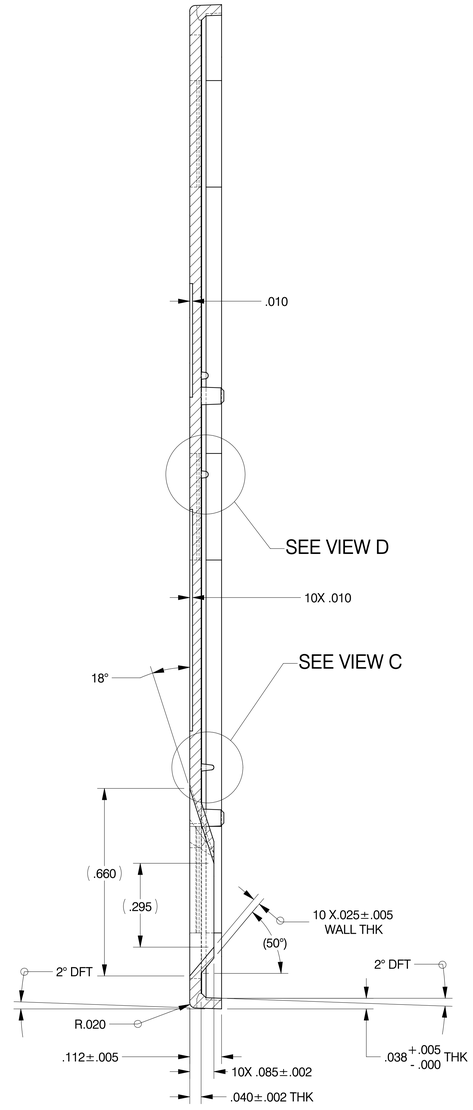
DETAIL H
SCALE 4 : 1



DETAIL B
SCALE 8 : 1



VIEW C
SCALE 20 : 1



SECTION A-A
SCALE 5 : 1

DISTRIBUTION STATEMENT D. DISTRIBUTION AUTHORIZED TO THE DEPARTMENT OF DEFENSE AND U.S. DOD CONTRACTORS ONLY; CRITICAL TECHNOLOGY; DETERMINATION MADE 07-11-28. OTHER REQUESTS SHALL BE REFERRED TO: DEPARTMENT OF THE ARMY, JPEO FOR CHEMICAL BIOLOGICAL DEFENSE, OFFICE OF JPM FOR BIOLOGICAL DEFENSE SYSTEMS, ATTN: SFAE-CBD-BD-BDS, ABERDEEN PROVING GROUND, MD 21010-5424.

DESTRUCTION NOTICE - DESTROY BY ANY METHOD THAT WILL PREVENT DISCLOSURE OF CONTENTS OR RECONSTRUCTION OF THE DOCUMENT.

WARNING - THIS DOCUMENT CONTAINS TECHNICAL DATA WHOSE EXPORT IS RESTRICTED BY THE ARMS EXPORT CONTROL ACT (TITLE 22, U.S.C., SEC 2751, et seq.) OR THE EXPORT ADMINISTRATION ACT OF 1979, AS AMENDED, TITLE 50, U.S.C., APP. 2401 et seq. VIOLATIONS OF THESE EXPORT LAWS ARE SUBJECT TO SEVERE CRIMINAL PENALTIES. DISSEMINATE IN ACCORDANCE WITH PROVISIONS OF DOD DIRECTIVE 5230.25.

QTY REQD	DWG SIZE	DRAWING OR PART NO.	NOMENCLATURE OR MATERIAL	SPECIFICATION	ITEM NO.
PARTS LIST					

APPLICATION	
DWG SIZE	NEXT ASSY
E	5-15-19323

EQUIPMENT CODE NO.		
244	245	246
247	283	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
2 PLACE DECIMALS ± .04
3 PLACE DECIMALS ± .010
ANGLES ± 0° 30'

MATERIAL
SEE NOTE 4

ORIGINAL DATE (YR-MO-DA): 08-01-07
DRAWN BY: JRC
CHECKER: SM
SUBMITTED: MIKE HOLT
DESIGN APPROVAL: ERIC STRUBA
DRAWING APPROVAL: SCOTT MILLS
CONTRACT NO.

U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

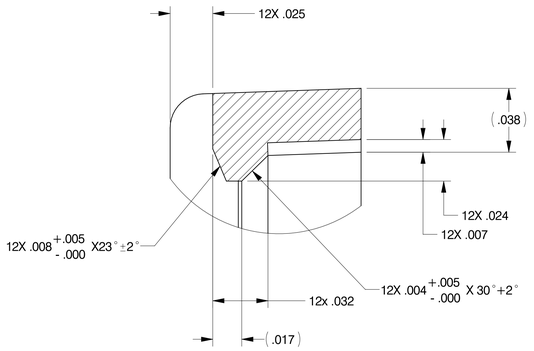
TOP, ASSAY STRIP CARRIER

SIZE	CAGE CODE	DWG NO.
E	81361	5-15-19325

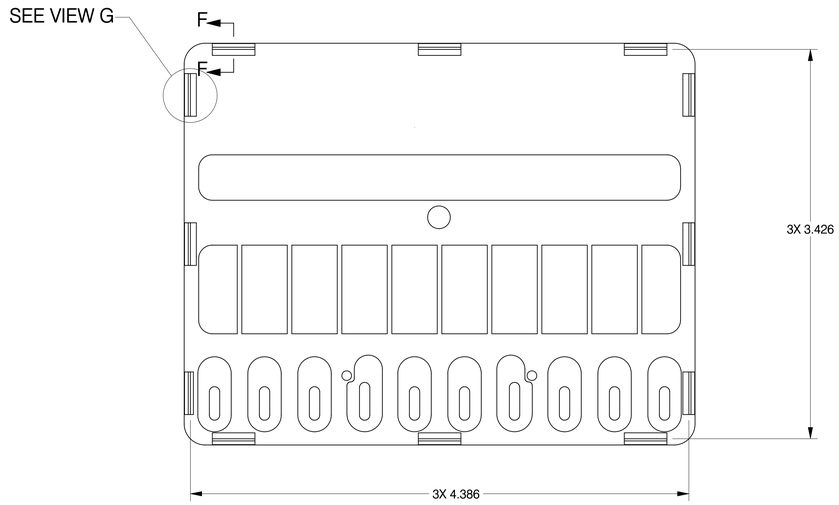
SCALE 2/1 SHEET 1 OF 2

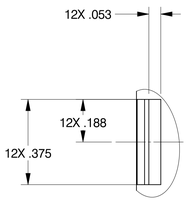
NOTES:
1. THIS DRAWING SHALL BE INTERPRETED IN ACCORDANCE WITH ASME Y14.100 WITH THE ADDITION OF APPENDICES B THROUGH E.
2. THE FOLLOWING ARE MANDATORY WHEN INDICATED BY ■
   - ☐ REMOVE BURRS ☐ BREAK SHARP EDGES .010 MAX
   - ☐ FILLETS R .010 MAX.
   - ☐ 125 ALL OVER, EXCEPT AS NOTED
   - ☐ DIMENSIONS APPLY AFTER PLATING
   - ☐ TOLERANCES ON STOCK MATERIAL SIZES, SHALL BE AS SPECIFIED IN APPLICABLE SPECIFICATIONS.
   - ■ ANSI Y14.5-DATED 1994 APPLIES
   - ☐ FED-STD-H28 APPLIES

REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
—	INITIAL RELEASE PER NOR 245-0017-0005, 07-11-28	08-01-07	SM

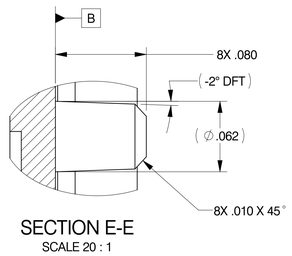


VIEW F
SCALE 30 : 1

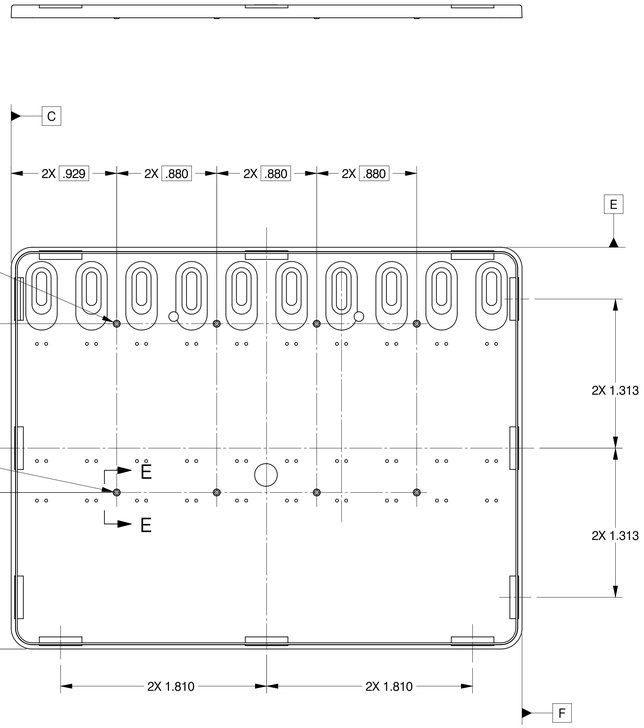




VIEW G
SCALE 4 : 1



SECTION E-E
SCALE 20 : 1



DISTRIBUTION STATEMENT D. DISTRIBUTION AUTHORIZED TO THE DEPARTMENT OF DEFENSE AND U.S. DOD CONTRACTORS ONLY; CRITICAL TECHNOLOGY; DETERMINATION MADE 07-11-28. OTHER REQUESTS SHALL BE REFERRED TO: DEPARTMENT OF THE ARMY, JPEO FOR CHEMICAL BIOLOGICAL DEFENSE, OFFICE OF JPM FOR BIOLOGICAL DEFENSE SYSTEMS; ATTN: SFAE-CBD-BD-BDS, ABERDEEN PROVING GROUND, MD 21010-5424.

DESTRUCTION NOTICE - DESTROY BY ANY METHOD THAT WILL PREVENT DISCLOSURE OF CONTENTS OR RECONSTRUCTION OF THE DOCUMENT.

WARNING - THIS DOCUMENT CONTAINS TECHNICAL DATA WHOSE EXPORT IS RESTRICTED BY THE ARMS EXPORT CONTROL ACT (TITLE 22, U.S.C., SEC 2751, et seq.) OR THE EXPORT ADMINISTRATION ACT OF 1979, AS AMENDED, TITLE 50, U.S.C., APP. 2401 et seq. VIOLATIONS OF THESE EXPORT LAWS ARE SUBJECT TO SEVERE CRIMINAL PENALTIES. DISSEMINATE IN ACCORDANCE WITH PROVISIONS OF DOD DIRECTIVE 5230.25.

QTY REQD	DWG SIZE	DRAWING OR PART NO.	NOMENCLATURE OR MATERIAL	SPECIFICATION	ITEM NO.

PARTS LIST

APPLICATION	
DWG SIZE	NEXT ASSY
E	5-15-19323

EQUIPMENT CODE NO.		
244	245	246
247	283	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
2 PLACE DECIMALS ± .04
3 PLACE DECIMALS ± .010
ANGLES ± 0° 30'
MATERIAL

ORIGINAL DATE (YR-MO-DA): 08-01-07
DRAWN BY: JRC
CHECKER: SM
SUBMITTED: MIKE HOLT
DESIGN APPROVAL: ERIC STRUBA
DRAWING APPROVAL: SCOTT MILLS
CONTRACT NO.

U.S. ARMY SOLDIER AND BIOLOGICAL CHEMICAL COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

TOP, ASSAY STRIP CARRIER

SIZE	CAGE CODE	DWG NO.
E	81361	5-15-19325

SCALE 2/1 SHEET 2 OF 2

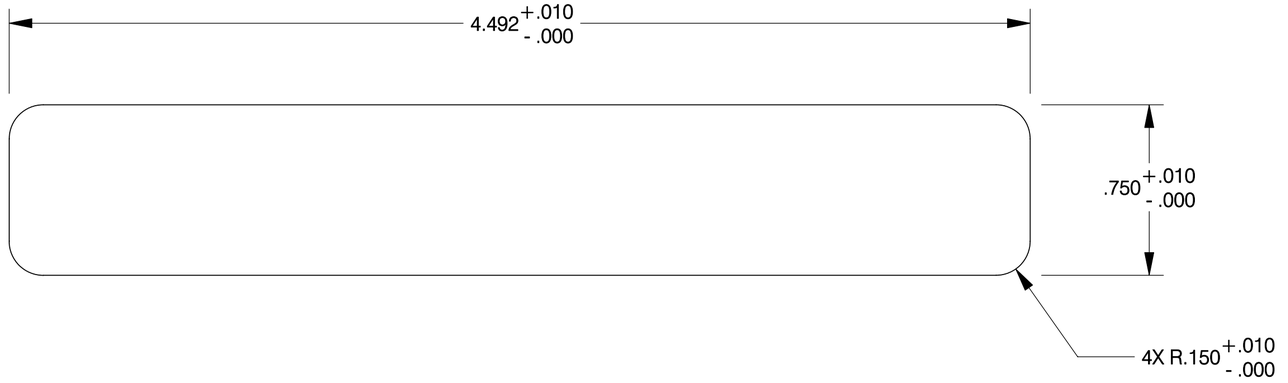
NOTES:

1. THIS DRAWING SHALL BE INTERPRETED IN ACCORDANCE WITH ASME Y14.100 WITH THE ADDITION OF APPENDICES B THROUGH E.
2. THE FOLLOWING ARE MANDATORY WHEN INDICATED BY ■
   - ☐ REMOVE BURRS ☐ BREAK SHARP EDGES .010 MAX
   - ☐ FILLETS R .010 MAX
   - ☐ 125 ALL OVER, EXCEPT AS NOTED
   - ☐ DIMENSIONS APPLY AFTER PLATING
   - ☐ TOLERANCES ON STOCK MATERIAL SIZES, SHALL BE AS SPECIFIED IN APPLICABLE SPECIFICATIONS.
   - ■ ASME Y14.5-DATED 1994 APPLIES
   - ☐ FED-STD-H28 APPLIES
3. IDENTIFICATION OF THE SUGGESTED ITEMS HEREON IS NOT TO BE CONSTRUED AS A GUARANTEE OF PRESENT OR CONTINUED AVAILABILITY.
4. MATERIAL:
   2 MILS (0.5 MM) CLEAR POLYESTER.
   1.5 MILS (0.038 MM) LOW OUTGASSING, ACRYLIC ACID FREE ADHESIVE WITH POLYESTER RELEASE LINER. (LINER NOT SHOWN FOR CLEARITY)
   TEMPERATURE RANGE: -40 °F TO 300 °F
   PEEL ADHESION: 48 OZ/IN.

SUGGESTED SOURCES OF SUPPLY			
CONTROL NUMBER	SUPPLIER DATA		
	CAGE CODE	PART NUMBER	NAME AND ADDRESS
5-15-19326	65592	ARCLEAN 8475	ADHESIVE RESEARCH INC. 400 SEAKS RUN ROAD P.O. BOX 100 GLEN ROCK, PA 17327

REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
—	INITIAL RELEASE PER NOR 245-0017-0006, 07-11-28	08-01-07	SM

FOR QUALITY ASSURANCE PROVISIONS
SEE QAP 5-15-19326



VENDOR ITEM DRAWING

QTY REQD	DWG SIZE	DRAWING OR PART NO.	NOMENCLATURE OR MATERIAL	SPECIFICATION	ITEM NO.

PARTS LIST

APPLICATION	
DWG SIZE	NEXT ASSY
E	5-15-19323

EQUIPMENT CODE NO.		
244	247	
245	283	
246		

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
2 PLACE DECIMALS ± .04
3 PLACE DECIMALS ± .010
ANGLES ± 0° 30'

MATERIAL
SEE NOTE 4

ORIGINAL DATE (YR-MO-DA): 08-01-07
DRAWN BY: MJC
CHECKER: SM
SUBMITTED: MIKE HOLT
DESIGN APPROVAL: ERIC STRUBA
DRAWING APPROVAL: SCOTT MILLS
CONTRACT NO.

U.S. ARMY SOLDIER AND BIOLOGICAL CHEMICAL COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

MEMBRANE, CARRIER SAMPLE WELL

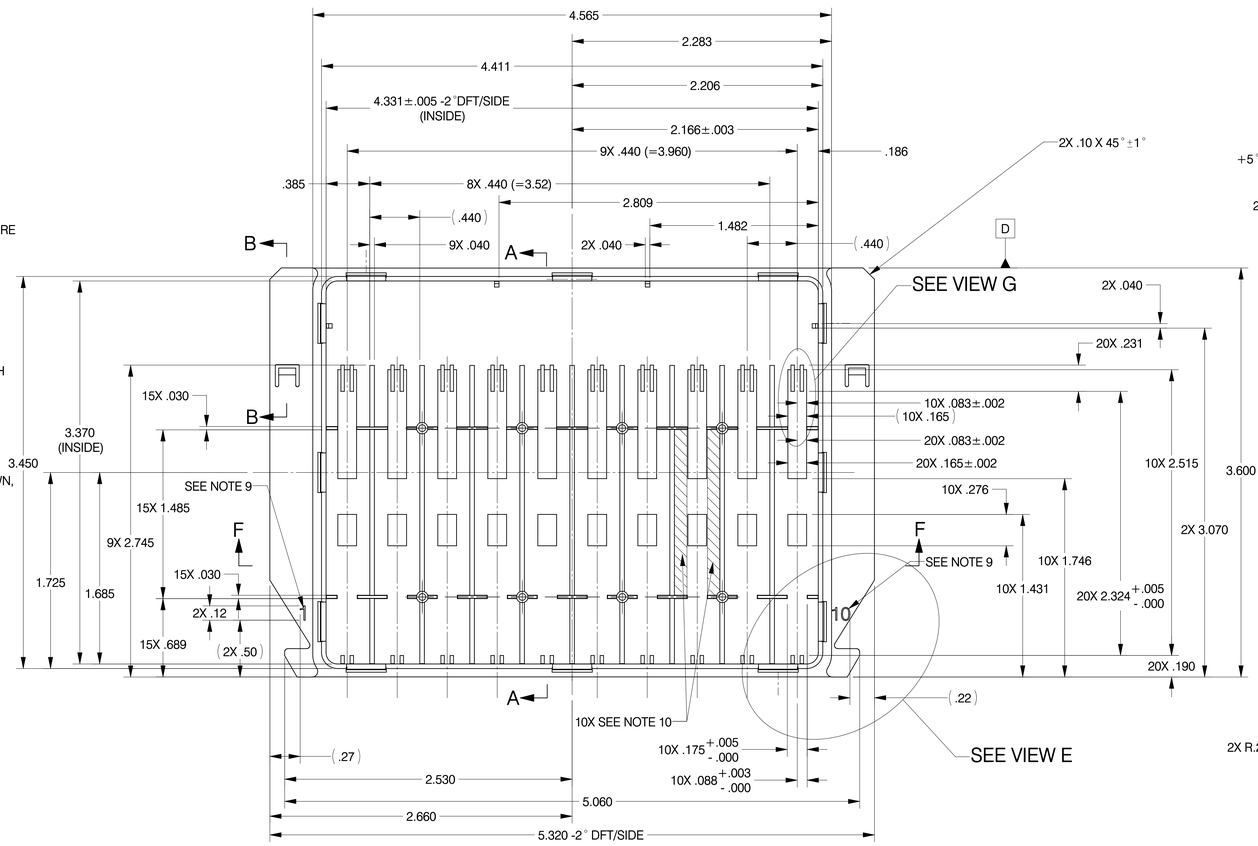
SIZE	CAGE CODE	DWG NO.
C	81361	5-15-19326

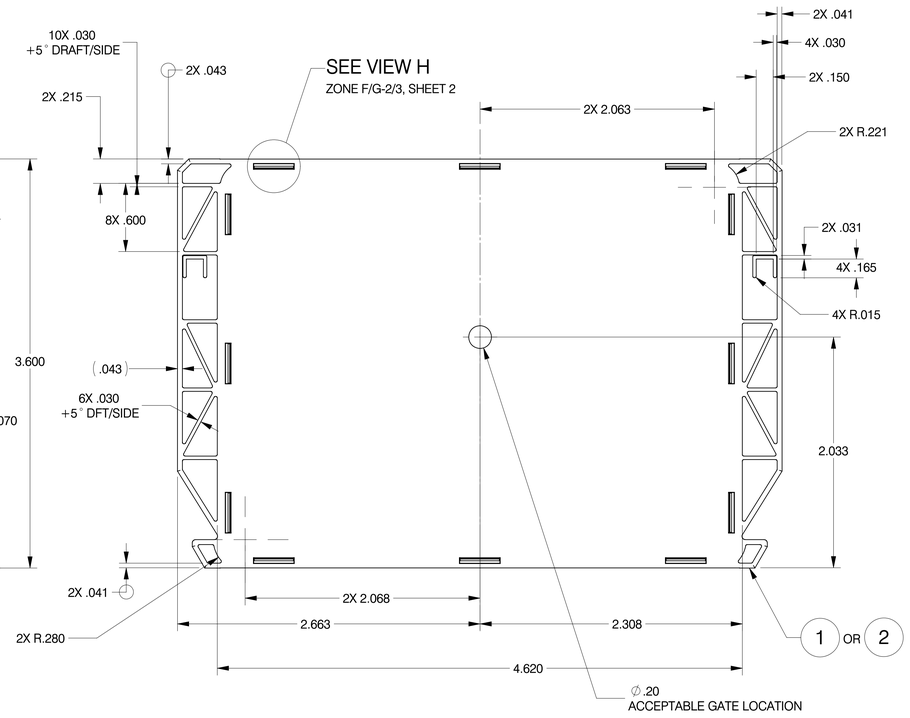
SCALE 2/1 SHEET

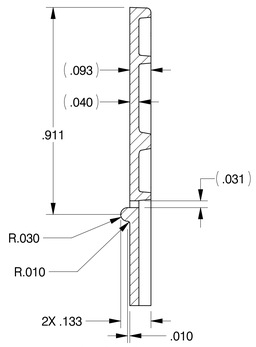
REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
—	INITIAL RELEASE PER NOR 245-0017-0007, 07-11-28	08-01-07	SM

NOTES:

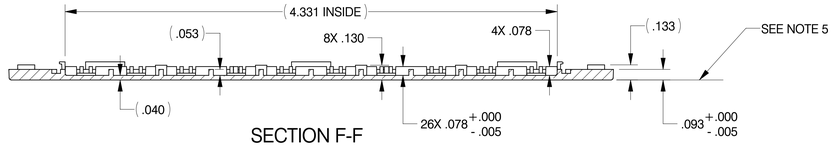
1. THIS DRAWING SHALL BE INTERPRETED IN ACCORDANCE WITH ASME Y14.100 WITH THE ADDITION OF APPENDICES B THROUGH E.
2. THE FOLLOWING ARE MANDATORY WHEN INDICATED BY ■
   - ☐ REMOVE BURRS ☐ BREAK SHARP EDGES .010 MAX
   - ☐ FILLETS R .010 MAX.
   - ☐ 125 ALL OVER, EXCEPT AS NOTED
   - ☐ DIMENSIONS APPLY AFTER PLATING
   - ☐ TOLERANCES ON STOCK MATERIAL SIZES, SHALL BE AS SPECIFIED IN APPLICABLE SPECIFICATIONS.
   - ■ ANSI Y14.5-DATED 1994 APPLIES
   - ☐ FED-STD-H28 APPLIES
3. REMOVE ALL FLASH.
4. FLAT SURFACES TO HAVE FLATNESS TOLERANCE OF .010/IN. AND NOT TO EXCEED .030/IN. OVER ENTIRE LENGTH OF PART.
5. NOMINAL WALL THICKNESS .040 IN. UNLESS OTHERWISE NOTED.
6. DRAFT ALL SURFACES 2° PER SIDE OF PARTING LINE (P/L) UNLESS OTHERWISE NOTED.
7. BAG BULK QUANITY OF PART IN ACCORDANCE WITH MIL-STD-2073-1, TAG BAG USING .12 IN. HIGH CHARACTERS IN ACCORDANCE WITH MIL-STD-130 USING BLACK INK PER A-A-208.
8. UNSPECIFIED RADII .010+.010.
9. TEXT TO BE POSITIONED APPROXIMATELY AS SHOWN, RAISED .010 TO .015 IN. HIGH.
10. NO EJECTOR PIN MARKS OR IMPERFECTIONS PERMITTED ON THESE SURFACES.
11. SNAP FIT LOCKING LUGS AND PRESS FIT HOLES ARE DIMENSIONED ON SHEET 2 0F 2.



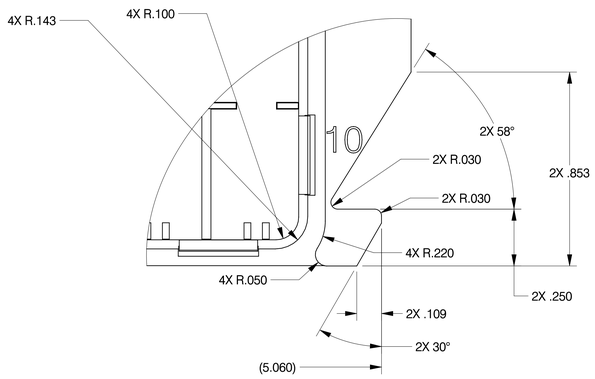




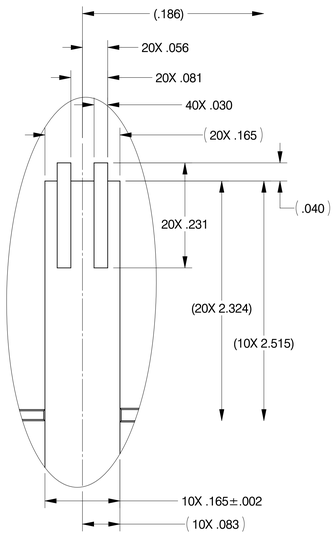
SECTION B-B
SCALE 4 : 1



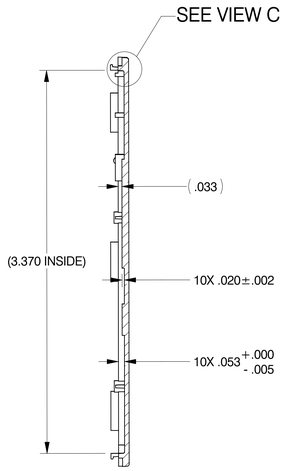
SECTION F-F



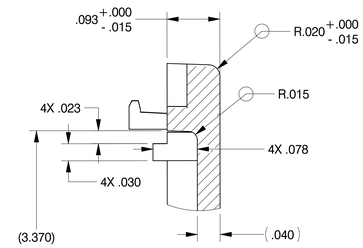
VIEW E
SCALE 4 : 1



VIEW G
SCALE 8 : 1



SECTION A-A



VIEW C
SCALE 10 : 1

QTY REQD	DWG SIZE	DRAWING OR PART NO.	NOMENCLATURE OR MATERIAL	SPECIFICATION	ITEM NO.
A/R		-2	LEXAN HF-1140-701, BLUE #25230	FED-STD-595	1
A/R		-1	LEXAN HF-1140-701, BLACK		1

PARTS LIST

APPLICATION		UNLESS OTHERWISE SPECIFIED
DWG SIZE	NEXT ASSY	DIMENSIONS ARE IN INCHES
E	5-15-19323	TOLERANCES ON:
		2 PLACE DECIMALS ± .04
		3 PLACE DECIMALS ± .010
		ANGLES ± 0° 30'
		MATERIAL

EQUIPMENT CODE NO.		
244	245	246
247	283	

ORIGINAL DATE (YR-MO-DA): 08-01-07
DRAWN BY: JRC
CHECKER: SM
SUBMITTED: MIKE HOLT
DESIGN APPROVAL: ERIC STRUBA
DRAWING APPROVAL: SCOTT MILLS
CONTRACT NO.

U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

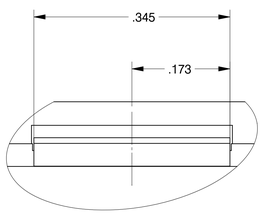
BOTTOM, ASSAY STRIP CARRIER

SIZE	CAGE CODE	DWG NO.
E	81361	5-15-19327

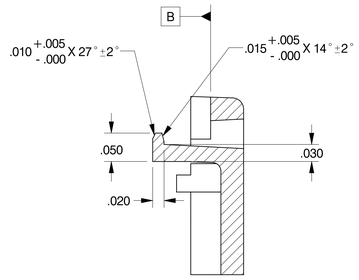
SCALE 2/1 SHEET 1 OF 2

NOTES:
1. THIS DRAWING SHALL BE INTERPRETED IN ACCORDANCE WITH ASME Y14.100 WITH THE ADDITION OF APPENDICES B THROUGH E.
2. THE FOLLOWING ARE MANDATORY WHEN INDICATED BY ■
- ☐ REMOVE BURRS ☐ BREAK SHARP EDGES .010 MAX
- ☐ FILLETS R .010 MAX.
- ☐ 125 ALL OVER, EXCEPT AS NOTED
- ☐ DIMENSIONS APPLY AFTER PLATING
- ☐ TOLERANCES ON STOCK MATERIAL SIZES, SHALL BE AS SPECIFIED IN APPLICABLE SPECIFICATIONS.
- ■ ANSI Y14.5-DATED 1994 APPLIES
- ☐ FED-STD-H28 APPLIES

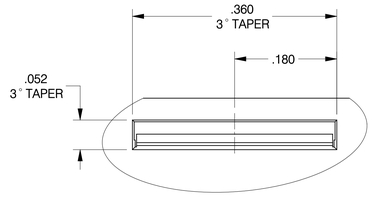
REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
—	INITIAL RELEASE PER NOR 245-0017-0007, 07-11-28	08-01-07	SM



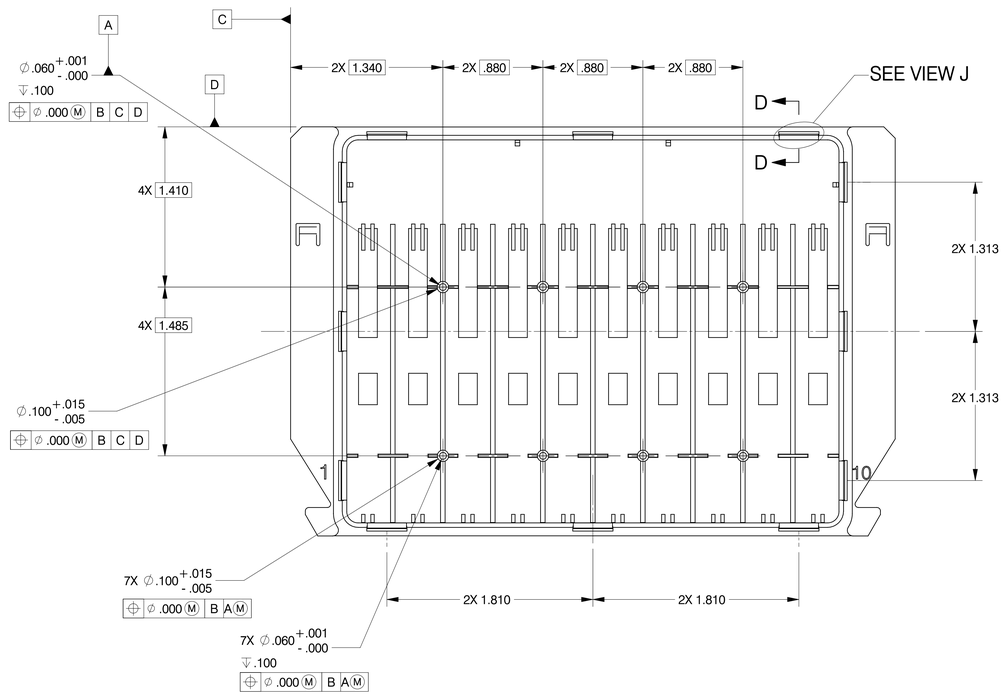
VIEW J
SCALE 10 : 1



SECTION D-D
SCALE 10 : 1



VIEW H
SHEET 1, ZONE G-2/3
SCALE 10 : 1



QTY REQD	DWG SIZE	DRAWING OR PART NO.	NOMENCLATURE OR MATERIAL	SPECIFICATION	ITEM NO.

PARTS LIST

APPLICATION	
DWG SIZE	NEXT ASSY
E	5-15-19323

EQUIPMENT CODE NO.		
244	245	246
247	283	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
2 PLACE DECIMALS ± .04
3 PLACE DECIMALS ± .010
ANGLES ± 0° 30'
MATERIAL

ORIGINAL DATE (YR-MO-DA): 08-01-07
DRAWN BY: JRC
CHECKER: SM
SUBMITTED: MIKE HOLT
DESIGN APPROVAL: ERIC STRUBA
DRAWING APPROVAL: SCOTT MILLS
CONTRACT NO.

U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

BOTTOM, ASSAY STRIP CARRIER

SIZE	CAGE CODE	DWG NO.
E	81361	5-15-19327

SCALE 2/1 SHEET 2 OF 2

NOTES:

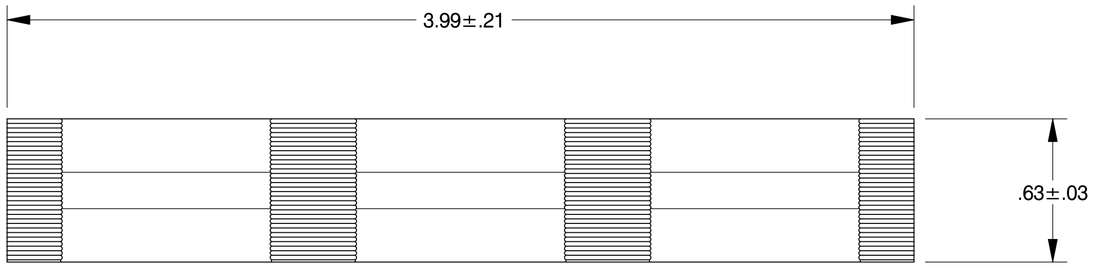
1. THIS DRAWING SHALL BE INTERPRETED IN ACCORDANCE WITH ASME Y14.100 WITH THE ADDITION OF APPENDICES B THROUGH E.
2. THE FOLLOWING ARE MANDATORY WHEN INDICATED BY ■
   - ☐ REMOVE BURRS ☐ BREAK SHARP EDGES .010 MAX
   - ☐ FILLETS R .010 MAX
   - ☐ 125 ALL OVER, EXCEPT AS NOTED
   - ☐ DIMENSIONS APPLY AFTER PLATING
   - ☐ TOLERANCES ON STOCK MATERIAL SIZES, SHALL BE AS SPECIFIED IN APPLICABLE SPECIFICATIONS.
   - ■ ASME Y14.5-DATED 1994 APPLIES
   - ☐ FED-STD-H28 APPLIES
3. IDENTIFICATION OF THE SUGGESTED ITEMS HEREON IS NOT TO BE CONSTRUED AS A GUARANTEE OF PRESENT OR CONTINUED AVAILABILITY.
4. SPECIFICATIONS:
   PRODUCT NAME: STRIP PAX SORBENT PACKET

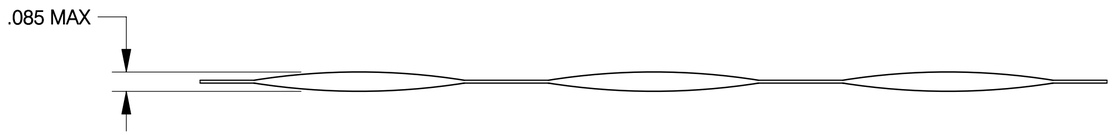
   MATERIAL
   DESCRIPTION: 3 TYVEK SORBENT PACKETS EACH PACKET FILLED WITH INDICATING SILICA GEL

   PHYSICAL
   ATTRIBUTES: DESICCANT WEIGHT = .25g EACH PACKET
   .75g ± 10% TOTAL
   MOISTURE CONTENT = 2.0% MAXIMUM

SUGGESTED SOURCES OF SUPPLY			
CONTROL NUMBER	SUPPLIER DATA		
	CAGE CODE	PART NUMBER	NAME AND ADDRESS
5-15-19328	22627	02-01909CG01	MULTISORB TECHNOLOGIES, INC. 325 HARLEM RD BUFFALO, NY 14224-1893

REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
—	INITIAL RELEASE PER NOR 245-0017-0008, 07-11-28	08-01-07	SM





VENDOR ITEM DRAWING

QTY REQD	DWG SIZE	DRAWING OR PART NO.	NOMENCLATURE OR MATERIAL	SPECIFICATION	ITEM NO.

PARTS LIST

APPLICATION	
DWG SIZE	NEXT ASSY
E	5-15-19323

EQUIPMENT CODE NO.		
244	247	
245	283	
246		

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
2 PLACE DECIMALS ± .04
3 PLACE DECIMALS ± .010
ANGLES ± 0° 30'

MATERIAL

ORIGINAL DATE (YR-MO-DA): 08-01-07
DRAWN BY: MJC
CHECKER: SM
SUBMITTED: MIKE HOLT
DESIGN APPROVAL: ERIC STRUBA
DRAWING APPROVAL: SCOTT MILLS
CONTRACT NO.

U.S. ARMY SOLDIER AND BIOLOGICAL CHEMICAL COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

DESICCANT STRIP

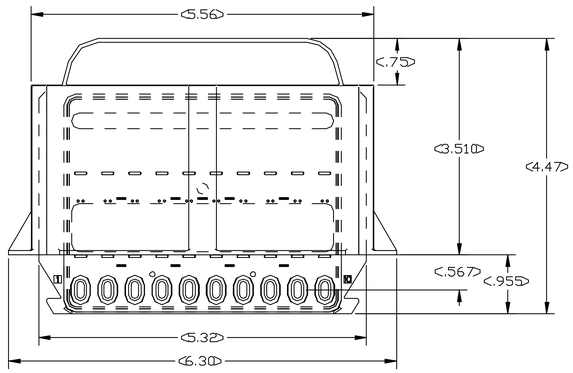
SIZE	CAGE CODE	DWG NO.
C	81361	5-15-19328

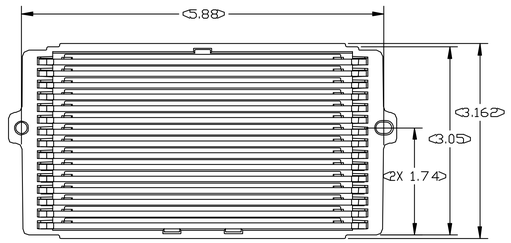
SCALE 2/1 SHEET

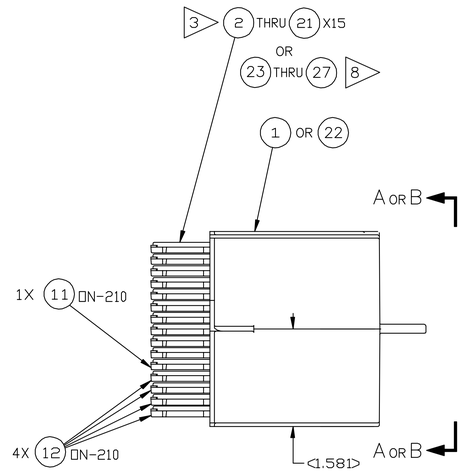
REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
D	REPLACES 32011930, REV C, DATED 00-08-03 NOR 245-0017-0015, 07-11-28	08-01-08	SM

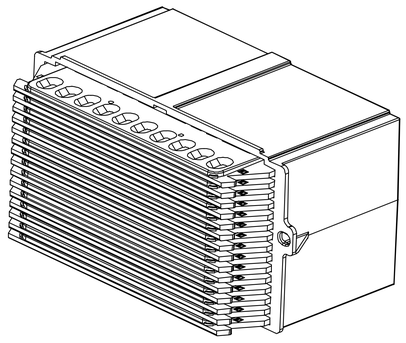
NOTES:

1. THIS DRAWING SHALL BE INTERPRETED IN ACCORDANCE WITH ASME Y14.100 WITH THE ADDITION OF APPENDICES B THROUGH E.
2. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M-1994.
3. ASSEMBLE ITEMS 2 THROUGH 21 AS APPLICABLE INTO ITEM 1 ASSURING SNAP FIT.
4. DELETED.
5. LABEL COMPLETED BOX ASSEMBLY WITH PERMANENT INK: PART NUMBER, DATE OF MANUFACTURE, AND MANUFACTURER CAGE CODE. LOCATION AND METHOD AT MANUFACTURER DISCRETION BUT SHALL NOT AFFECT OPERATIONAL PERFORMANCE.
6. CARRIER ASSEMBLY, ASSAY STRIP POSITIONS 3, 6, 9, 12 AND 15 SHALL BE OCCUPIED BY ITEM 26. ALL OTHER POSITIONS SHALL BE OCCUPIED BY ITEM 27.
7. STRIP DATE OF MANUFACTURE (DOM) SHALL STATE THE EARLIEST STRIP DOM FOR THE ASSAY STRIP CARRIER ASSEMBLY, 32011932, USED TO POPULATE THE BOX ASSEMBLY.
8. ASSEMBLE ITEMS 23 THROUGH 27, AS APPLICABLE, INTO ITEM 1 OR 22, AS APPLICABLE, ASSURING SNAP FIT.
9. AFTER ASSEMBLY THE CARRIER BOX ASSEMBLY AND COMPONENTS SHALL BE FREE OF VISIBLE SURFACE IRREGULARITIES SUCH AS SMUDGES, SCRATCHES, FINGERPRINTS AND DEBRIS.
10. FOR ORDERING CONFIGURATIONS NOT SPECIFIED, CONTACT THE ADDRESS SHOWN IN THE DISTRIBUTION STATEMENT.
11. PACKAGING FOR CONFIGURATIONS NOT SPECIFIED HEREIN SHALL BE IN ACCORDANCE WITH CONTRACTUAL REQUIREMENTS, NOT SPI P5-15-31917.









SCALE 1/1

CURRENT DESIGN ACTIVITY CAGE CODE 81361
U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

-260	-250	-240	-230	-210	-200	-190	-180	-170	-160	-150	-140	-130	-120	-110	-100	-90	-80	-70	-60	-50	-40	-30	-20	-10	ITEM NO.	PART OR IDENTIFYING NO.	CAGE NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION
QUANTITY REQUIRED																												PARTS LIST	
10	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	27	32011932-270	79986	CARRIER ASSEMBLY, ASSAY STRIP	
5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	26	32011932-260	79986	CARRIER ASSEMBLY, ASSAY STRIP	
–	15	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	25	32011932-250	79986	CARRIER ASSEMBLY, ASSAY STRIP	
–	–	15	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	24	32011932-240	79986	CARRIER ASSEMBLY, ASSAY STRIP	
–	–	–	15	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	23	32011932-230	79986	CARRIER ASSEMBLY, ASSAY STRIP	
1	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	22	32011931-03	79986	BOX, CARRIER ASSEMBLY, BLUE	
–	–	–	–	–	15	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	21	32011932-200	79986	CARRIER ASSEMBLY, ASSAY STRIP	
–	–	–	–	–	–	15	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	20	32011932-190	79986	CARRIER ASSEMBLY, ASSAY STRIP	
–	–	–	–	–	–	–	15	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	19	32011932-180	79986	CARRIER ASSEMBLY, ASSAY STRIP	
–	–	–	–	–	–	–	–	15	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	18	32011932-170	79986	CARRIER ASSEMBLY, ASSAY STRIP	
–	–	–	–	–	–	–	–	–	15	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	17	32011932-160	79986	CARRIER ASSEMBLY, ASSAY STRIP	
–	–	–	–																								^6	CARRIER ASSEMBLY, ASSAY STRIP	
–	–	–	–																										
–	–	–	–																										
–	–	–	–																										
–	–	–	–																										
–	–	–	–																										
–	–	–	–																										
–	–	–	–																										
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	15	–	–	–	–	–	–	–	9	32011932-80	79986	CARRIER ASSEM_	
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	15	–	–	–	–	–	–	8	32011932-70	79986	CARRIER ASSEMBLY, ASSAY STRIP	
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	15	–	–	–	–	–	7	32011932-60	79986	CARRIER ASSEMBLY, ASSAY STRIP	
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	15	–	–	–	–	6	32011932-50	79986	CARRIER ASSEMBLY, ASSAY STRIP	
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	15	–	–	–	5	32011932-40	79986	CARRIER ASSEMBLY, ASSAY STRIP	
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	15	–	–	4	32011932-30	79986	CARRIER ASSEMBLY, ASSAY STRIP	
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	15	–	3	32011932-20	79986	CARRIER ASSEMBLY, ASSAY STRIP	
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	15	2	32011932-10	79986	CARRIER ASSEMBLY, ASSAY STRIP	
–	1	–	–	–	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32011931-01	79986	BOX, CARRIER ASSEMBLY, BLACK	

DISTRIBUTION STATEMENT D. DISTRIBUTION AUTHORIZED TO THE DEPARTMENT OF DEFENSE AND U.S. DOD CONTRACTORS ONLY; CRITICAL TECHNOLOGY; DETERMINATION MADE 07-11-28. OTHER REQUESTS SHALL BE REFERRED TO DEPARTMENT OF THE ARMY, JPEO FOR CHEMICAL BIOLOGICAL DEFENSE, OFFICE OF JPM FOR BIOLOGICAL DEFENSE SYSTEMS, ATTN: SFAE-CBD-BD-BDS, APG, MARYLAND 21010-5424.

DESTRUCTION NOTICE – DESTROY BY ANY METHOD THAT WILL PREVENT DISCLOSURE OF CONTENTS OR RECONSTRUCTION OF THE DOCUMENT.

WARNING – THIS DOCUMENT CONTAINS TECHNICAL DATA WHOSE EXPORT IS RESTRICTED BY THE ARMS EXPORT CONTROL ACT (TITLE 22, U.S.C., SEC 2751, et. seq.) OR THE EXPORT ADMINISTRATION ACT OF 1979, AS AMENDED, TITLE 50, U.S.C., APP. 2401 et. seq. VIOLATIONS OF THESE EXPORT LAWS ARE SUBJECT TO SEVERE CRIMINAL PENALTIES. DISSEMINATE IN ACCORDANCE WITH PROVISIONS OF DOD DIRECTIVE 5230.25.

EQUIPMENT CODE NO.		
244	247	
245	283	
246		

81361-5-15-31917 NEXT ASSY | JBPDS USED ON | APPLICATION - -

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± | DECIMALS .XX ±0.03 .XXX ±0.010 | ANGLES ±0.5°
DO NOT SCALE DRAWING

TREATMENT

FINISH

THIRD ANGLE PROJECTION

CONTRACT NO. DAAM01-97-D-0004

APPROVALS	DATE
DRAWN REM	11-Jan-00
CHECKED –	–
ENGINEER –	–
–	

Battelle ... Putting Technology To Work
505 King Avenue
Columbus, Ohio 43201-2693
Telephone (614) 424-6424
Telex 24-3454

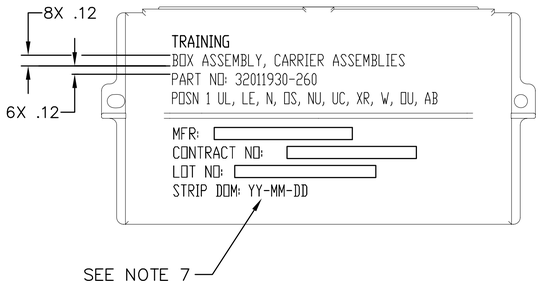
TITLE: BOX ASSEMBLY, CARRIER ASSEMBLIES

SIZE D | CAGE NO. 79986 | DWG. NO. 32011930 | REV D | SCALE 1/1 | SHEET 1 OF 2

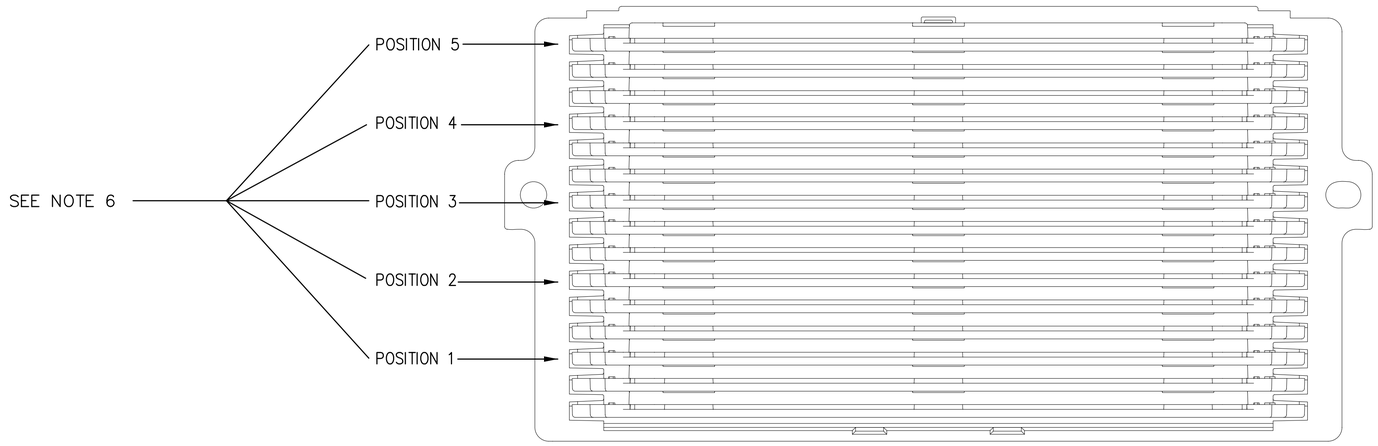
DWG. NO. 32011930 SH 1 REV D

COMP FILE 832011930 ASSEM BDY-3

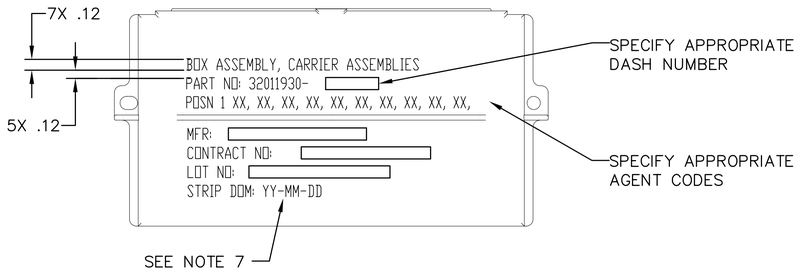
REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
—	INITIAL RELEASE PER NOR 245-0017-0015, 07-11-28	08-01-08	SM



VIEW B–B
FOR CONFIGURATION –260 ONLY
SEE NOTE 5
SCALE 1/1



FOR CONFIGURATION –260 ONLY
SEE NOTE 6



VIEW A–A
FOR CONFIGURATIONS –230, –240, AND –250 ONLY
SEE NOTE 5
SCALE 1/1

CURRENT DESIGN ACTIVITY CAGE CODE 81361
U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010–5424

SIZE	CAGE NO.	DWG. NO.
D	79986	32011930
SCALE 3/1		SHEET 2 OF 2

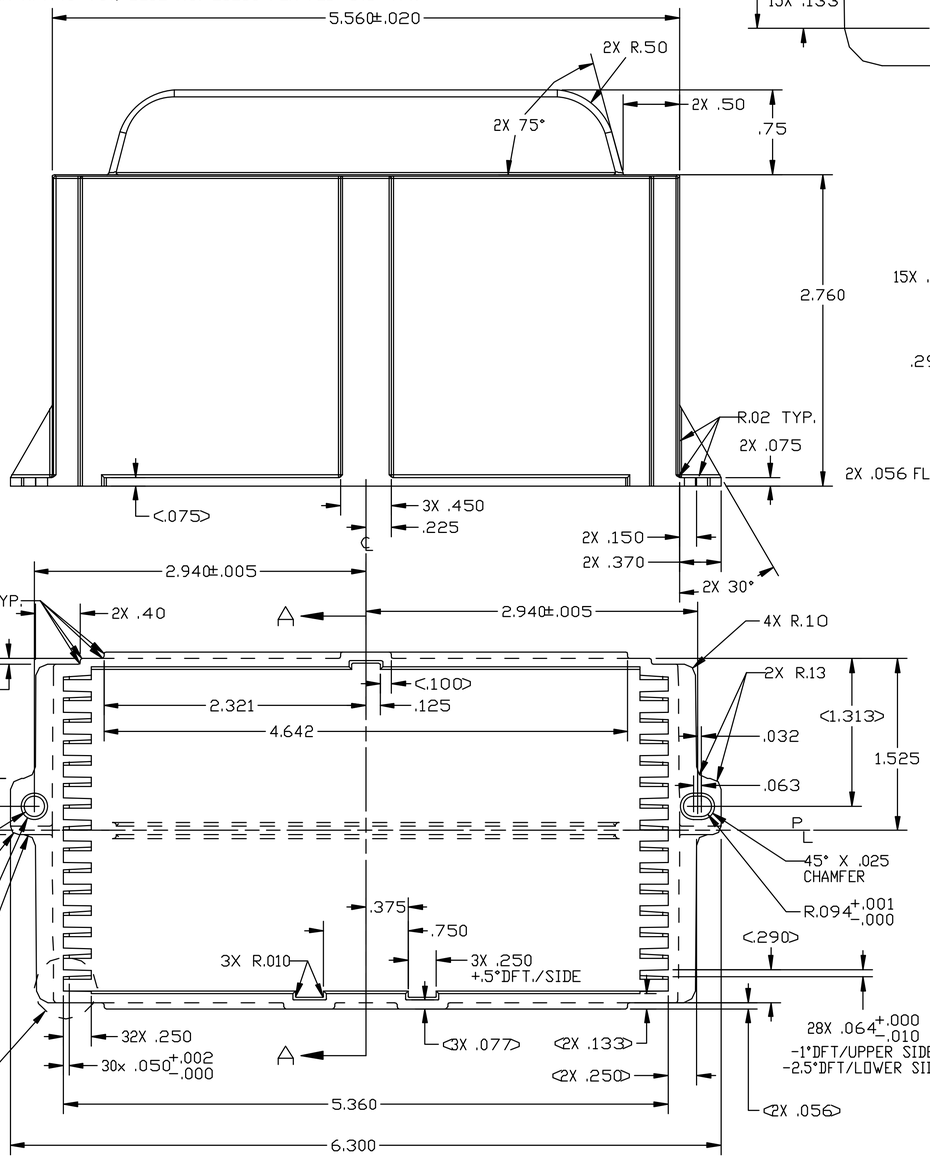
DWG. NO. 32011937 SH 2 REV.

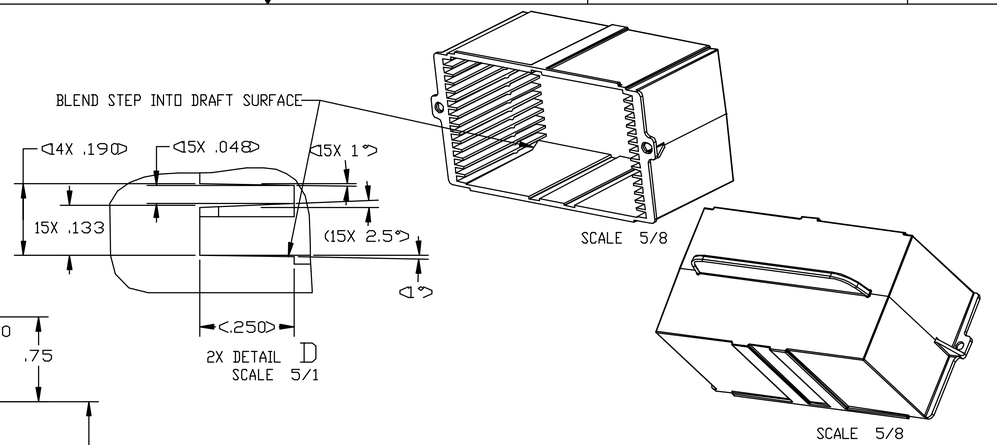
COMP. FILE: #32011937_PART BOTTOM_STRIP_TRAYS

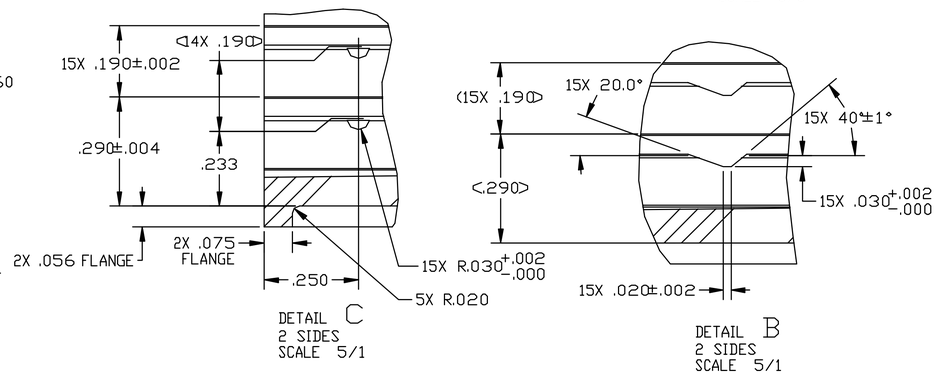
NOTES:

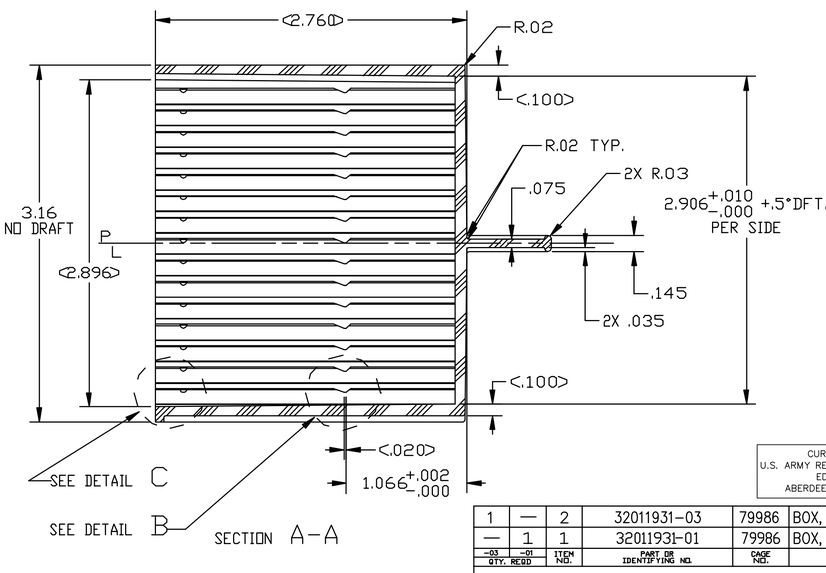
1. THIS DRAWING SHALL BE INTERPRETED IN ACCORDANCE WITH ASME Y14.100 WITH THE ADDITION OF APPENDICES B THROUGH E.
2. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
3. REMOVE ALL FLASH.
4. MATERIAL: LEXAN HF1140-701, BLACK.
5. FLAT SURFACES TO HAVE FLATNESS TOLERANCE OF 0.005"/IN. AND NOT TO EXCEED 0.020" OVER ENTIRE LENGTH OF PART.
6. NOMINAL WALL THICKNESS: 0.100" UNLESS OTHERWISE NOTED.
7. DRAFT ALL SURFACES 0.5°PER SIDE OF PARTING LINE (P/L) UNLESS OTHERWISE NOTED.
8. IDENTIFY WITH PART NO. IN ACCORDANCE WITH MIL-STD-130.
9. MATERIAL: LEXAN HF1140-701, BLUE NO. 25230 PER FED-STD-171.

REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
A	REPLACES 32011931 DATED 00-01-12, NOR 245-0017-0016, 07-11-25	08-01-25	SM









CURRENT DESIGN ACTIVITY CAGE CODE 81361
U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

-03 QTY. REQD	-01 QTY. REQD	ITEM NO.	PART OR IDENTIFYING NO.	CAGE NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION
1	—	2	32011931-03	79986	BOX, CARRIER ASSEMBLY, BLUE	NOTE 9
—	1	1	32011931-01	79986	BOX, CARRIER ASSEMBLY, BLACK	NOTE 4

PARTS LIST

EQUIPMENT CODE NO.		
244	247	
245	283	
246		

32011930	JBPDS
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± DECIMALS .XX ±0.04 .XXX ±0.010 ANGLES ±0.5°
DO NOT SCALE DRAWING

TREATMENT

FINISH

THIRD ANGLE PROJECTION

CONTRACT NO. DAAM01-97-D-0004

APPROVALS	DATE
DRAWN REM	12-Jan-00
CHECKED -	-
ENGINEER -	-

Battelle ... Putting Technology To Work
505 King Avenue
Columbus, Ohio 43201-2693
Telephone (614) 424-6424
Telex 24-5454

TITLE: BOX, CARRIER ASSEMBLY

SIZE D | CAGE NO. 79986 | DWG. NO. 32011931

SCALE 3/2 | SHEET 1 OF 1

DWG. NO. 32011931 SH 1 REV A

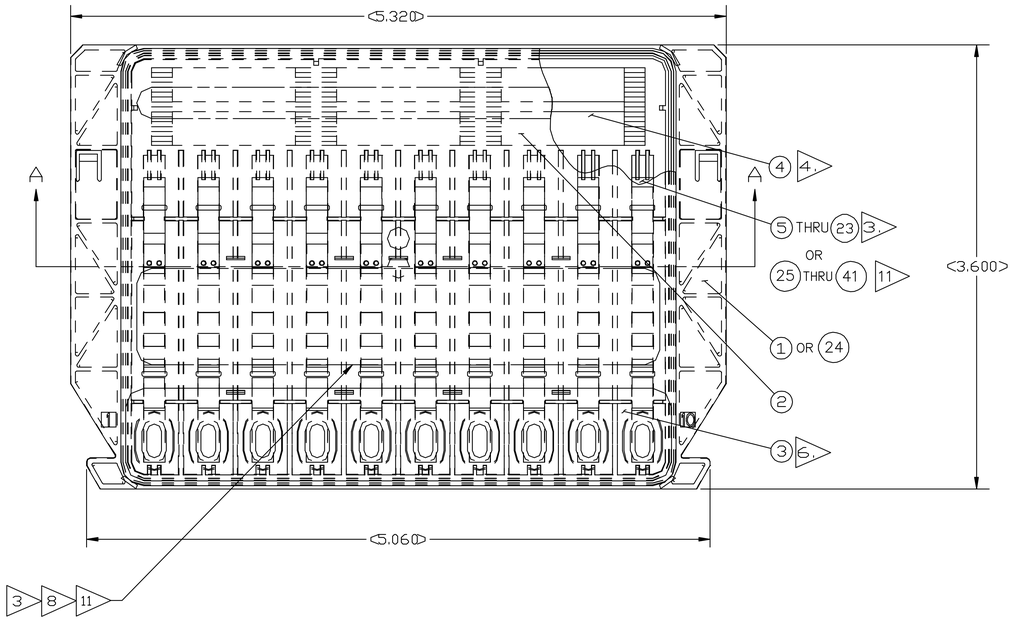
COMP. FILE #32011931
PART BOX-3

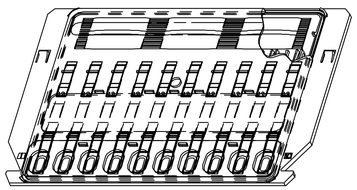
DISTRIBUTION STATEMENT D. DEPARTMENT OF DEFENSE AND U.S. DOD CONTRACTORS ONLY
ATTN: SFAE-CBD-BD-BDS, ABERDEEN PROVING GROUND, MD 21010-5424.
DESTRUCTION NOTICE - DESTROY BY ANY METHOD THAT WILL PREVENT DISCLOSURE OF CONTENTS OR RECONSTRUCTION OF THE DOCUMENT.
WARNING - EXPORT CONTROLLED.

REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
C	REPLACES 32011932 SHT 1, REV B, DATED 00-08-03 NOR 245-0017-0017, 07-11-28 NOR CL2-0023-0001, 08-01-24	08-01-24	SM

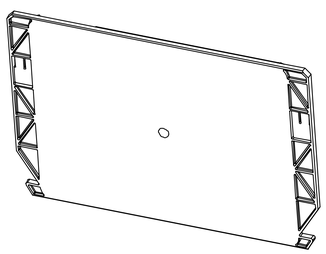
NOTES:

1. THIS DRAWING SHALL BE INTERPRETED IN ACCORDANCE WITH ASME Y14.100 WITH THE ADDITION OF APPENDICES B THROUGH E.
2. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
3. ASSEMBLE ITEM(S) 5 THRU 23 IN POSITIONS SHOWN (SEE SHEET 2, TABLE I) PRIOR TO ULTRASONIC WELDMENT OF ITEM 1 WITH ITEM 2. ASSAY STRIP COLOR CODE(S) TO BE VISIBLE BETWEEN LARGE WINDOW AND ITEM 4.
4. ASSEMBLE ITEM 4 IN POSITION SHOWN (WINDOW STRIP TOWARD TOP, CARRIER) PRIOR TO ULTRASONIC WELDMENT OF ITEM 1 WITH ITEM 2.
5. PRIOR TO ASSEMBLE OF ITEM 3.
6. ASSEMBLE EDGES OF ITEM 3 TO +/- 0.015 INCHES OF PERIMETER OF ITEM 2. SECURE ITEM 3 TO ITEM 2 FREE OF BUBBLES, CREASES AND WRINKLES.
7. LABEL COMPLETED CARRIER ASSEMBLY WITH PERMANENT INK: PART NUMBER, DATE OF MANUFACTURE, AND MANUFACTURER CAGE CODE. LOCATION AND METHOD AT MANUFACTURER DISCRETION BUT SHALL NOT AFFECT OPERATIONAL PERFORMANCE.
8. AFTER ASSEMBLY, INSPECT ASSAY STRIP CARRIER ASSEMBLY TO BE FREE OF VISIBLE SURFACE INTERNAL AND EXTERNAL IRREGULARITIES SUCH AS SMUDGES, SCRATCHES OR FINGERPRINTS.
9. PRIOR TO ASSEMBLY INSPECT ITEMS 1 THROUGH 41 AS APPLICABLE TO BE FREE OF VISUAL CONTAMINANTS .005" DIAMETER OR LARGER AND VISIBLE SURFACE IRREGULARITIES SUCH AS SMUDGES, SCRATCHES, AND FINGERPRINTS. FOR IRREGULAR SHAPED CONTAMINANTS THE DIAMETER SHALL BE TAKEN AS THE AVERAGE OF THE MAXIMUM LENGTH PLUS THE MAXIMUM WIDTH.
10. DELETED.
11. ASSEMBLE ITEMS 25 THRU 41 IN POSITIONS SHOWN (SEE SHEET 2, TABLE II) PRIOR TO ULTRASONIC WELDMENT OF ITEM 1 OR 24 WITH ITEM 2. ASSAY STRIP COLOR CODES TO BE VISIBLE BETWEEN WINDOW AND ITEM 4.





SCALE 1.000



SCALE 1.000

QUANTITY REQUIRED																							ITEM NO.	PART OR IDENTIFYING NO.	CAGE NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION
-270	-260	-250	-240	-230	-200	-190	-180	-170	-160	-150	-140	-130	-120	-110	-100	-90	-80	-70	-60	-50	-40	-30	-20	-10					
–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	41	81361-5-15-19324-017	81361	ASSAY STRIP	OS
10	9	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	40	81361-5-15-19324-016	81361	ASSAY STRIP	TN
–	1	–	–	2	–	–	–	–	–	–	–	–	–	–	10	–	–	–	–	–	–	–	–	–	39	81361-5-15-19324-015	81361	ASSAY STRIP	TP
–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	38	81361-5-15-19324-014	81361	ASSAY STRIP	NU
–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	37	81361-5-15-19324-013	81361	ASSAY STRIP	OU
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	36	81361-5-15-19324-012	81361	ASSAY STRIP	EV
–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	35	81361-5-15-19324-011	81361	ASSAY STRIP	LE
–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	34	81361-5-15-19324-010	81361	ASSAY STRIP	AB
–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	33	81361-5-15-19324-009	81361	ASSAY STRIP	UL
–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	32	81361-5-15-19324-008	81361	ASSAY STRIP	N
–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	31	81361-5-15-19324-007	81361	ASSAY STRIP	W
–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	30	81361-5-15-19324-006	81361	ASSAY STRIP	UC
–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	29	81361-5-15-19324-005	81361	ASSAY STRIP	XR
–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	28	81361-5-15-19324-004	81361	ASSAY STRIP	OV
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	27	81361-5-15-19324-003	81361	ASSAY STRIP	MS
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	26	81361-5-15-19324-002	81361	ASSAY STRIP	EH
–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	25	81361-5-15-19324-001	81361	ASSAY STRIP	BG
1	1	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	24	32011937-03	79986	BOTTOM, ASSAY STRIP CARRIER, BLUE	LEXAN, HF1140-701, BLUE
–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	23	32011933-019	79986	ASSAY STRIP	□S
–	–	–	–	–	1	4	5	4	1	8	5	5	5	10	–	–	–	–	–	–	–	–	–	–	22	32011933-018	79986	ASSAY STRIP	NEGATIVE
–	–	–	–	–	–	–	–	–	1	–	5	–	–	–	–	–	–	–	–	–	–	–	–	–	21	32011933-017	79986	ASSAY STRIP	POSITIVE, LEVEL 3
–	–	–	–	–	–	–	–	–	–	–	–	5	–	–	–	10	–	–	–	–	–	–	–	–	20	32011933-016	79986	ASSAY STRIP	POSITIVE, LEVEL 2
–	–	–	–	–	–	–	–	–	–	–	–	–	5	–	–	–	10	–	–	–	–	–	–	–	19	32011933-015	79986	ASSAY STRIP	POSITIVE, LEVEL 1
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	18	32011933-014	79986	ASSAY STRIP	NU
–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	17	32011933-013	79986	ASSAY STRIP	□U
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	16	32011933-012	79986	ASSAY STRIP	EV
–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	1	2	–	–	–	–	–	15	32011933-011	79986	ASSAY STRIP	LE
–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	14	32011933-010	79986	ASSAY STRIP	AB
–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	13	32011933-009	79986	ASSAY STRIP	UL
–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	1	2	–	–	–	–	–	12	32011933-008	79986	ASSAY STRIP	N
–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	1	2	–	–	–	–	–	11	32011933-007	79986	ASSAY STRIP	W
–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	1	2	–	–	–	–	–	10	32011933-006	79986	ASSAY STRIP	UC
–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	1	2	–	–	–	–	–	9	32011933-005	79986	ASSAY STRIP	XR
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	10	–	–	–	8	32011933-004	79986	ASSAY STRIP	□V
–	–	–	–	–	–	2	2	2	–	–	–	–	–	–	–	–	–	–	–	2	–	10	–	–	7	32011933-003	79986	ASSAY STRIP	MS
–	–	–	–	–	–	2	2	2	–	–	–	–	–	–	–	–	–	–	–	2	–	–	10	–	6	32011933-002	79986	ASSAY STRIP	EH
–	–	–	–	–	–	2	1	1	–	2	–	–	–	–	–	–	–	–	–	2	–	–	–	10	5	32011933-001	79986	ASSAY STRIP	BG
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	32014013-001	79986	DESICCANT, StripPax®	INDICATING SILICA GEL
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	32011936-01	79986	MEMBRANE, CARRIER SAMPLE WELL	
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	32011935-01	79986	TOP, ASSAY STRIP CARRIER	LEXAN HF1140-112
–	–	1	–	–	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32011937-01	79986	BOTTOM, ASSAY STRIP CARRIER, BLACK	LEXAN HF1140-701

PARTS LIST

CURRENT DESIGN ACTIVITY CAGE CODE 81361
U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

DISTRIBUTION STATEMENT D. DISTRIBUTION AUTHORIZED TO THE DEPARTMENT OF DEFENSE AND U.S. DOD CONTRACTORS ONLY; CRITICAL TECHNOLOGY; DETERMINATION MADE 07-11-28. OTHER REQUESTS SHALL BE REFERRED TO DEPARTMENT OF THE ARMY, JPEO FOR CHEMICAL BIOLOGICAL DEFENSE, OFFICE OF JPM FOR BIOLOGICAL DEFENSE SYSTEMS, ATTN: SFAE-CBD-BD-BDS, APG, MARYLAND 21010-5424.

DESTRUCTION NOTICE – DESTROY BY ANY METHOD THAT WILL PREVENT DISCLOSURE OF CONTENTS OR RECONSTRUCTION OF THE DOCUMENT.

WARNING – THIS DOCUMENT CONTAINS TECHNICAL DATA WHOSE EXPORT IS RESTRICTED BY THE ARMS EXPORT CONTROL ACT (TITLE 22, U.S.C., SEC 2751, et. seq.) OR THE EXPORT ADMINISTRATION ACT OF 1979, AS AMENDED, TITLE 50, U.S.C., APP. 2401 et. seq. VIOLATIONS OF THESE EXPORT LAWS ARE SUBJECT TO SEVERE CRIMINAL PENALTIES. DISSEMINATE IN ACCORDANCE WITH PROVISIONS OF DOD DIRECTIVE 5230.25.

EQUIPMENT CODE NO.		
244	247	
245	283	
246		

32011930	JBPDS	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± DECIMALS .XX ±0.01 .XXX ±0.001 ANGLES ±0.5° DO NOT SCALE DRAWING	CONTRACT NO. –
NEXT ASSY	USED ON	APPROVALS	DATE
APPLICATION		DRAWN REM	11-Jan-00
		CHECKED –	–
		ENGINEER –	–
		TREATMENT	
		FINISH	
		THIRD ANGLE PROJECTION	

Battelle ... Putting Technology To Work
505 King Avenue
Columbus, Ohio 43201-2693
Telephone (614) 424-6424
Telex 24-5454

TITLE: CARRIER ASSEMBLY, ASSAY STRIP

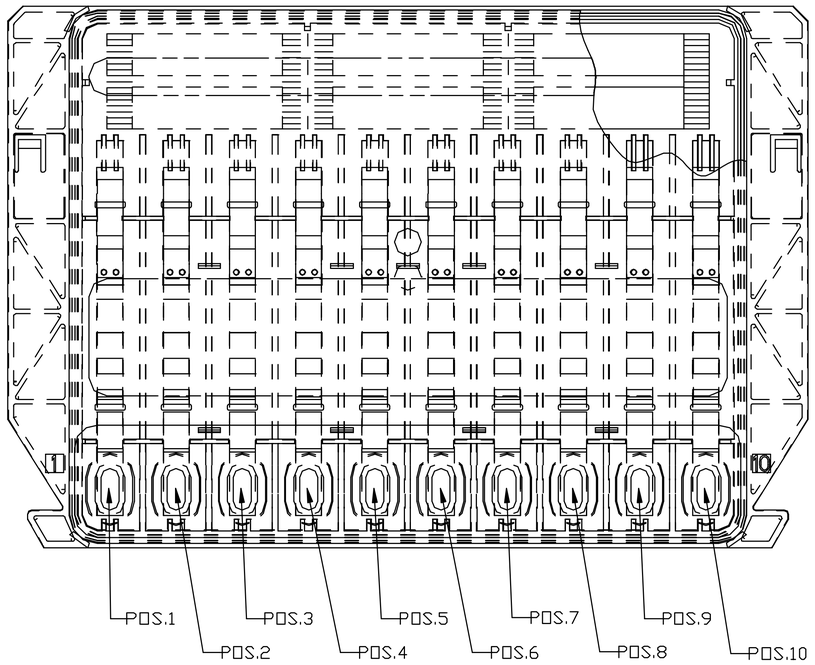
SIZE D | CAGE NO. 79986 | DWG NO. 32011932

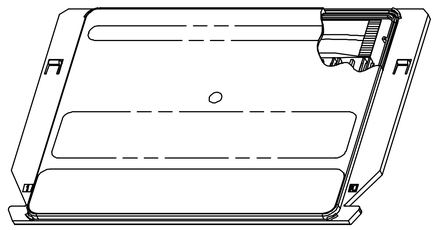
SCALE 2.000 | SHEET 1 OF 2

DWG. NO. 32011932 SH 1 REV C

COMP FILE 32011932 ASSEM 1.DWG

REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
C	REPLACES 32011932 SHT 2, DATED 00-08-03 NOR 245-0017-0017, 07-11-28 NOR CL2-0023-0001, 08-01-24	08-01-24	SM





SCALE 1.000

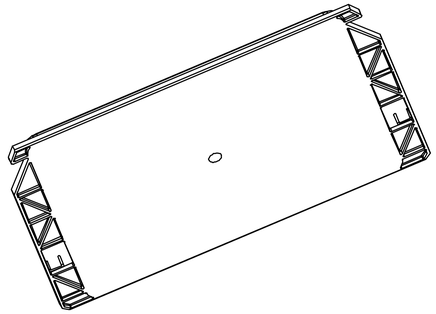


TABLE I

DRAWING NO 32011932	DASH NO'S FOR DRAWING 32011933 (ASSAY STRIP, ITEMS 5 THRU 23) 3									
	POS.1	POS.2	POS.3	POS.4	POS.5	POS.6	POS.7	POS.8	POS.9	POS.10
-10	-001	-001	-001	-001	-001	-001	-001	-001	-001	-001
-20	-002	-002	-002	-002	-002	-002	-002	-002	-002	-002
-30	-003	-003	-003	-003	-003	-003	-003	-003	-003	-003
-40	-004	-004	-004	-004	-004	-004	-004	-004	-004	-004
-50	-001	-001	-002	-002	-003	-003	-004	-004	---	---
-60	-005	-005	-006	-006	-007	-007	-008	-008	-011	-011
-70	-005	-006	-007	-008	-009	-010	-011	-012	-013	-014
-80	-015	-015	-015	-015	-015	-015	-015	-015	-015	-015
-90	-016	-016	-016	-016	-016	-016	-016	-016	-016	-016
-100	DELETED									
-110	-018	-018	-018	-018	-018	-018	-018	-018	-018	-018
-120	-015	-015	-015	-015	-015	-018	-018	-018	-018	-018
-130	-016	-016	-016	-016	-016	-018	-018	-018	-018	-018
-140	-017	-017	-017	-017	-017	-018	-018	-018	-018	-018
-150	-001	-018	-018	-018	-018	-018	-018	-018	-018	-001
-160	-018	-017	---	---	---	---	---	---	---	---
-170	-018	-001	-018	-002	-002	-003	-003	-018	-004	-018
-180	-018	-001	-018	-002	-002	-003	-003	-018	-018	-018
-190	-018	-001	-001	-002	-002	-003	-003	-018	-018	-018
-200	-008	-011	-007	-005	-009	-019	-006	-010	-018	-013

TABLE II

DRAWING NO. 81361-5-15-19324	DASH NO'S FOR DRAWING 81361-5-15-19324 (ASSAY STRIP, ITEMS 25 THRU 41) 11									
	POS 1	POS 2	POS 3	POS 4	POS 5	POS 6	POS 7	POS 8	POS 9	POS 10
-100	-015, TP	-015, TP	-015, TP	-015, TP	-015, TP	-015, TP	-015, TP	-015, TP	-015, TP	-015, TP
-230	-015, TP	-016, TN	-015, TP	-016, TN	———	———	———	———	———	———
-240	-001, BG	-004, OV	———	———	———	———	———	———	———	———
-250	-009, UL	-011, LE	-008, N	-017, OS	-014, NU	-006, UC	-005, XR	-007, W	-013, OU	-010, AB
-260	-016, TN	-016, TN	-016, TN	-016, TN	-015, TP	-016, TN	-016, TN	-016, TN	-016, TN	-016, TN
-270	-016, TN	-016, TN	-016, TN	-016, TN	-016, TN	-016, TN	-016, TN	-016, TN	-016, TN	-016, TN

COMP. FILE #32011932 ASSEM TRAYS

CURRENT DESIGN ACTIVITY CAGE CODE 81361
U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

SIZE	CAGE NO.	DWG. NO.
D	79986	32011932
SCALE 2.000		SHEET 2 OF 2

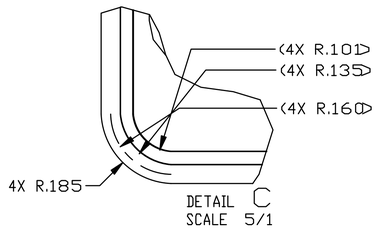
DWG. NO. 32011932 SH 2 REV. C

\\data\workflow\32011932S002.dwg DATE: 08-01-30 14:38 BY: jeremy.urban

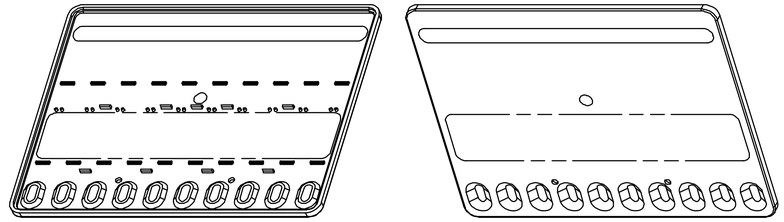
NOTES:

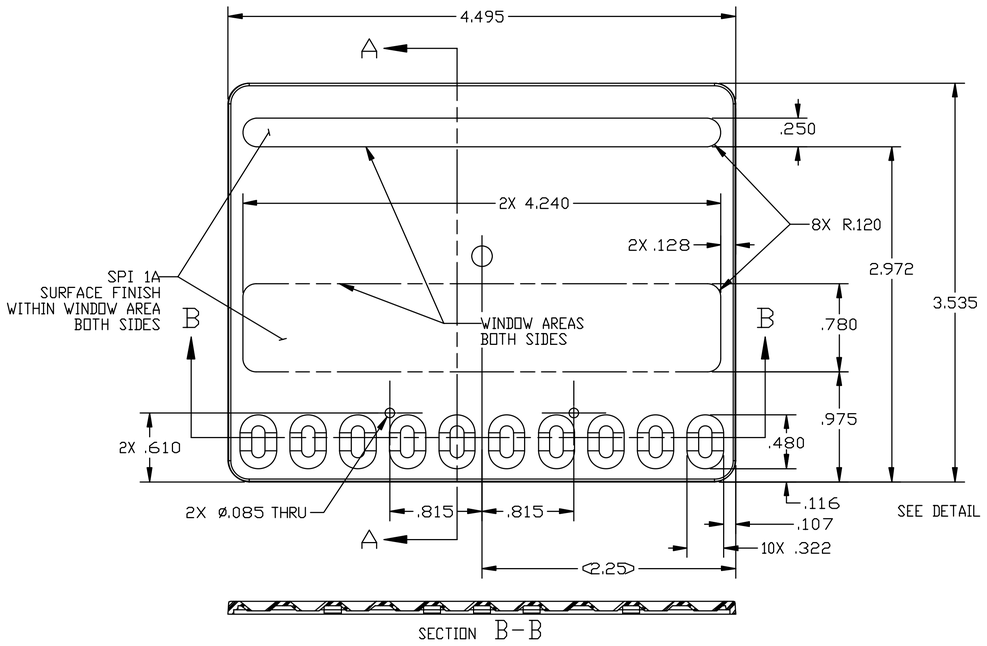
1. THIS DRAWING SHALL BE INTERPRETED IN ACCORDANCE WITH ASME Y14.100 WITH THE ADDITION OF APPENDICES B THROUGH E.
2. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
3. REMOVE ALL FLASH.
4. MATERIAL: LEXAN HF 1140-112 - COLOR: CLEAR.
5. FLAT SURFACES TO HAVE FLATNESS TOLERANCE OF .005/IN. AND NOT TO EXCEED .020 OVER ENTIRE LENGTH OF PART.
6. IDENTIFY WITH PART NO. IN ACCORDANCE WITH MIL-STD-130.

REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
A	REPLACES 32011935 DATED 00-01-11 NOR 245-0017-0018, 07-11-28	08-01-25	SM

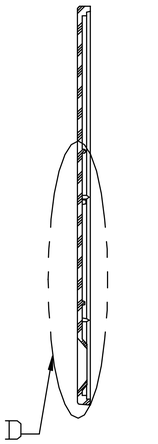


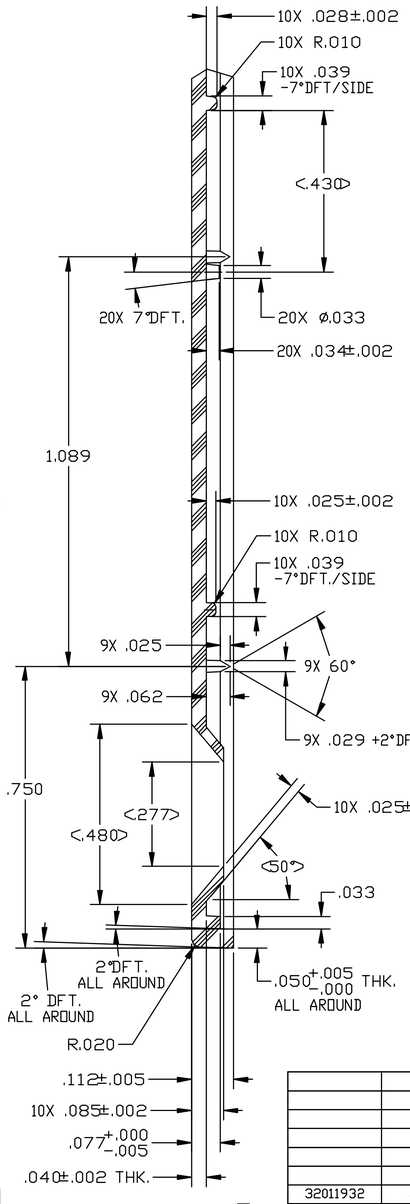
DETAIL C
SCALE 5/1


SCALE 1/1
VOLUME = .688 IN^3

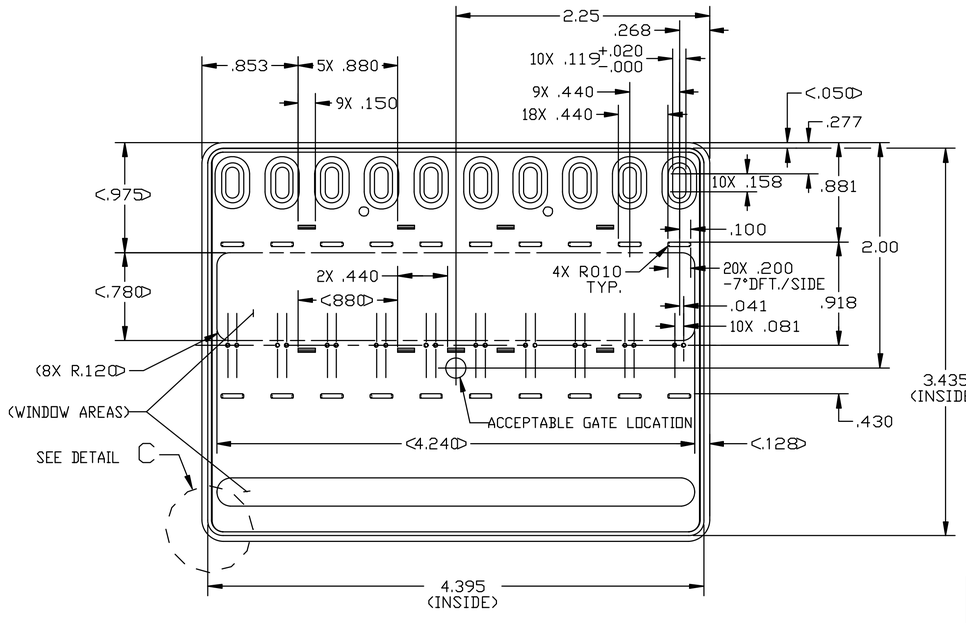


SECTION B-B


SECTION A-A



DETAIL D
SCALE 5/1



EQUIPMENT CODE NO.		
244	247	
245	283	
246		

DISTRIBUTION STATEMENT D. DISTRIBUTION AUTHORIZED TO THE DEPARTMENT OF DEFENSE AND U.S. DOD CONTRACTORS ONLY; CRITICAL TECHNOLOGY; DETERMINATION MADE 07-11-28. OTHER REQUESTS SHALL BE REFERRED TO DEPARTMENT OF THE ARMY, JPEO FOR CHEMICAL BIOLOGICAL DEFENSE, OFFICE OF JPM FOR BIOLOGICAL DEFENSE SYSTEMS, ATTN: SFAE-CBD-BD-BDS, APG, MARYLAND 21010-5424.

DESTRUCTION NOTICE – DESTROY BY ANY METHOD THAT WILL PREVENT DISCLOSURE OF CONTENTS OR RECONSTRUCTION OF THE DOCUMENT.

WARNING – THIS DOCUMENT CONTAINS TECHNICAL DATA WHOSE EXPORT IS RESTRICTED BY THE ARMS EXPORT CONTROL ACT (TITLE 22, U.S.C., SEC 2751, et. seq.) OR THE EXPORT ADMINISTRATION ACT OF 1979, AS AMENDED, TITLE 50, U.S.C., APP. 2401 et. seq. VIOLATIONS OF THESE EXPORT LAWS ARE SUBJECT TO SEVERE CRIMINAL PENALTIES. DISSEMINATE IN ACCORDANCE WITH PROVISIONS OF DOD DIRECTIVE 5230.25.

CURRENT DESIGN ACTIVITY CAGE CODE 81361
U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

QTY. REQD	ITEM NO.	PART OR IDENTIFYING NO.	CAGE NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION
-01	1	32011935-01	79986	TOP, ASSAY STRIP CARRIER	NOTE 4

PARTS LIST

32011932	JBPDS
NEXT ASSY	USED ON

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± DECIMALS .XX ±0.04 .XXX ±0.010 ANGLES ±0.5°
DO NOT SCALE DRAWING

TREATMENT

FINISH

THIRD ANGLE PROJECTION

CONTRACT NO. DAAM01-97-D-0004

Battelle ... Putting Technology To Work
505 King Avenue
Columbus, Ohio 43201-2693
Telephone (614) 424-6424
Telex 24-5454

APPROVALS	DATE
DRAWN REM	11-Jan-00
CHECKED –	–
ENGINEER –	–

TITLE: TOP, ASSAY STRIP CARRIER

SIZE D | CAGE NO. 79986 | DWG. NO. 32011935 | REV. A | SCALE 3/2 | SHEET 1 OF 1

DWG. NO. 32011935 SH 1 REV. A

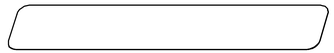
COMP FILE #32011935
PART TOP_STRIP_TRAY4

REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
A	REPLACES 32011936 DATED 00-01-11 NOR 245-0017-0019, 07-11-28	08-01-25	SM

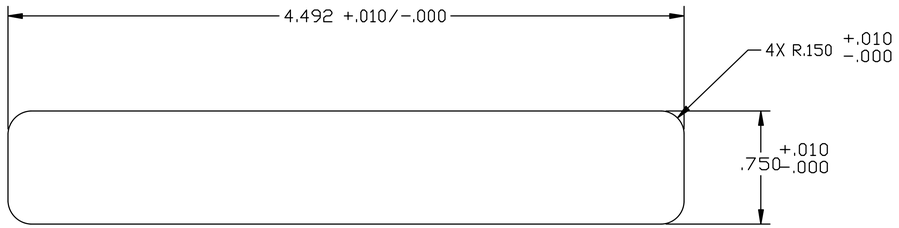
NOTES:

1. THIS DRAWING SHALL BE INTERPRETED IN ACCORDANCE WITH ASME Y14.100 WITH THE ADDITION OF APPENDICES B THROUGH E.
2. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M.

3. MATERIAL: ADHESIVES RESEARCH
   - 2 MIL CLEAR POLYESTER
   - DEV.#8475 TRANSFER ADHESIVE.
   - LINER; KRAFT PAPER OR POLYESTER WITH PULL TAB (NOT SHOWN)



SCALE 1.0



COMP FILE M32011936
PART MEMBRANE_CARRIER

CURRENT DESIGN ACTIVITY CAGE CODE 81361
U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

QTY. REQD	ITEM NO.	PART OR IDENTIFYING NO.	CAGE NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION
1	1	32011936-01	79986	MEMBRANE, CARRIER SAMPLE WELL	3

PARTS LIST

EQUIPMENT CODE NO.		
244	247	
245	283	
246		

32011932	JBPDS
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS DECIMALS ANGLES
± .XX ±0.01 ±0.5°
.XXX ±0.005
DO NOT SCALE DRAWING

TREATMENT

FINISH

THIRD ANGLE PROJECTION

CONTRACT NO. DAAM01-97-D-0004

APPROVALS	DATE
DRAWN REM	11-Jan-00
CHECKED –	–
ENGINEER –	–

Battelle
... Putting Technology To Work
505 King Avenue
Columbus, Ohio 43201-2693
Telephone (614) 424-6424
Telex 24-5454

TITLE
MEMBRANE, CARRIER
SAMPLE WELL

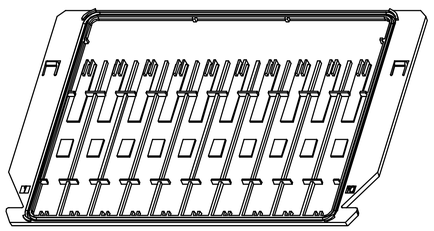
SIZE D | CAGE NO. 79986 | DWG. NO. 32011936 | REV. A

SCALE 2.000 | SHEET 1 OF 1

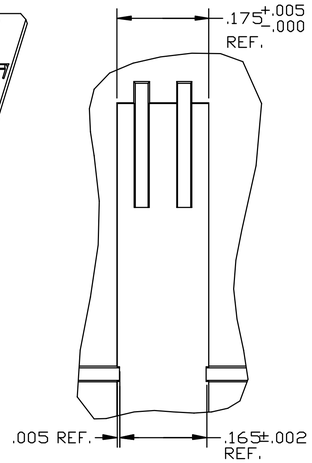
DWG. NO. 32011936 | SH 1 | REV. A

REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
B	REPLACES 32011937 SHT 1, DATED 00-06-13 NOR 245-0017-0020, 07-11-28	08-01-07	SM

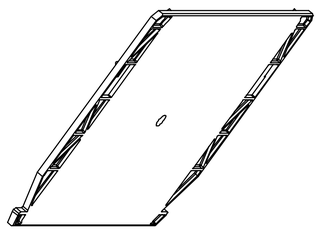
NOTES:
1. THIS DRAWING SHALL BE INTERPRETED IN ACCORDANCE WITH ASME Y14.100 WITH THE ADDITION OF APPENDICES B THROUGH E.
2. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M-1994.
3. REMOVE ALL FLASH.
4. MATERIAL: LEXAN HF1140-701, BLACK.
5. FLAT SURFACES TO HAVE FLATNESS TOLERANCE OF 0.010/IN. AND NOT TO EXCEED 0.030" OVER ENTIRE LENGTH OF PART.
6. NOMINAL WALL THICKNESS 0.040" UNLESS OTHERWISE NOTED.
7. DRAFT ALL SURFACES 2°PER SIDE OF PARTING LINE (P/L) UNLESS OTHERWISE NOTED.
8. BAG PART IN ACCORDANCE WITH MIL-STD-2073-1. TAG BAG USING .12" HIGH CHARACTERS IN ACCORDANCE WITH MIL-STD-130 USING BLACK INK PER A-A-208.
9. MATERIAL: LEXAN HF1140-701, BLUE NO. 25230 PER FED-STD-171.

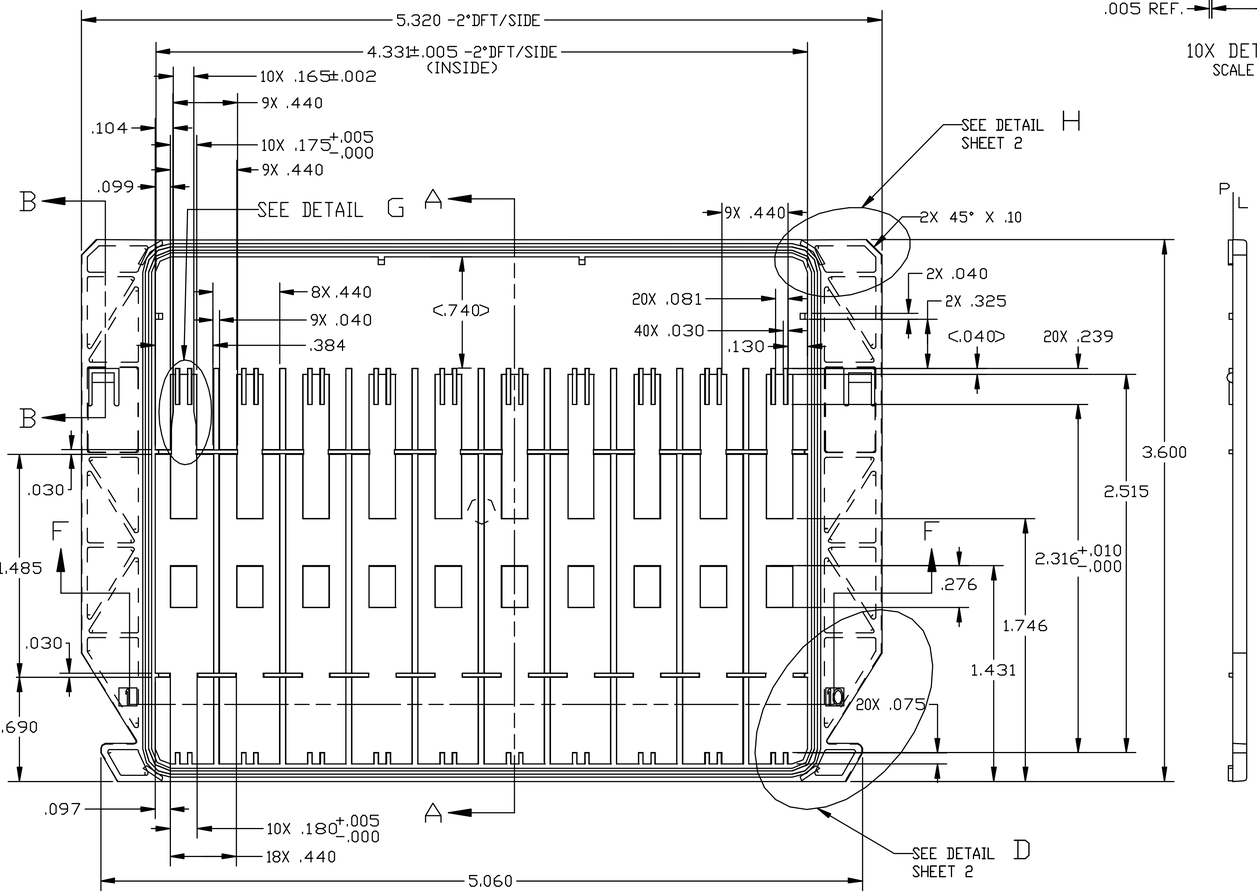


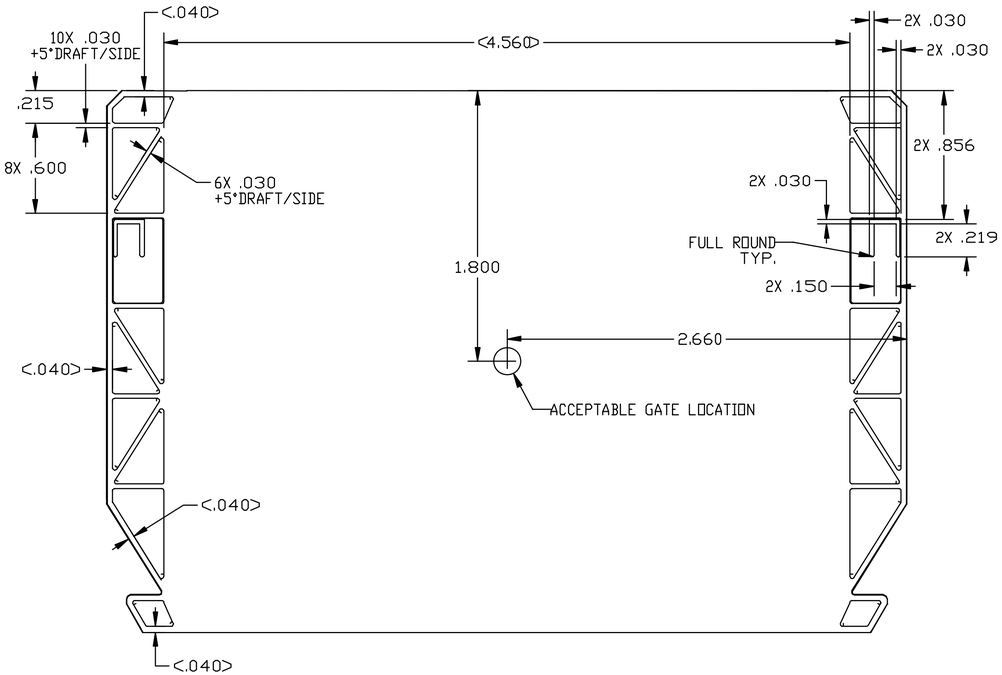
SCALE 1/1
VOLUME = .957 IN^3

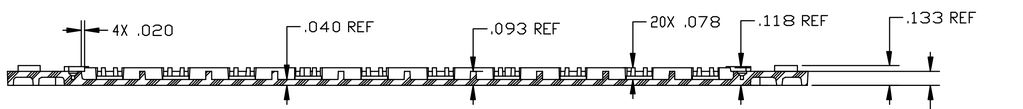


10X DETAIL G
SCALE 7/1









SECTION F-F

CURRENT DESIGN ACTIVITY CAGE CODE 81361
U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

1	—	2	32011937-03	79986	BOTTOM, ASSAY STRIP CARRIER, BLUE	NOTE 9
—	1	1	32011937-01	79986	BOTTOM, ASSAY STRIP CARRIER, BLACK	NOTE 4
-03 QTY. REQD	-01	ITEM NO.	PART OR IDENTIFYING NO.	CAGE NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION

PARTS LIST

EQUIPMENT CODE NO.	
244	247
245	283
246	

32011932	JBPDS
NEXT ASSY	USED ON

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS DECIMALS ANGLES
± .XX ±0.04 ±0.5°
.XXX ±0.010
DO NOT SCALE DRAWING

TREATMENT

FINISH

THIRD ANGLE PROJECTION

CONTRACT NO. DAAM01-97-D-0004

Battelle ... Putting Technology To Work
505 King Avenue
Columbus, Ohio 43201-2693
Telephone (614) 424-6424
Telex 24-5454

APPROVALS	DATE
DRAWN REM	11-Jan-00
CHECKED -	-
ENGINEER -	-

TITLE: BOTTOM, ASSAY STRIP CARRIER

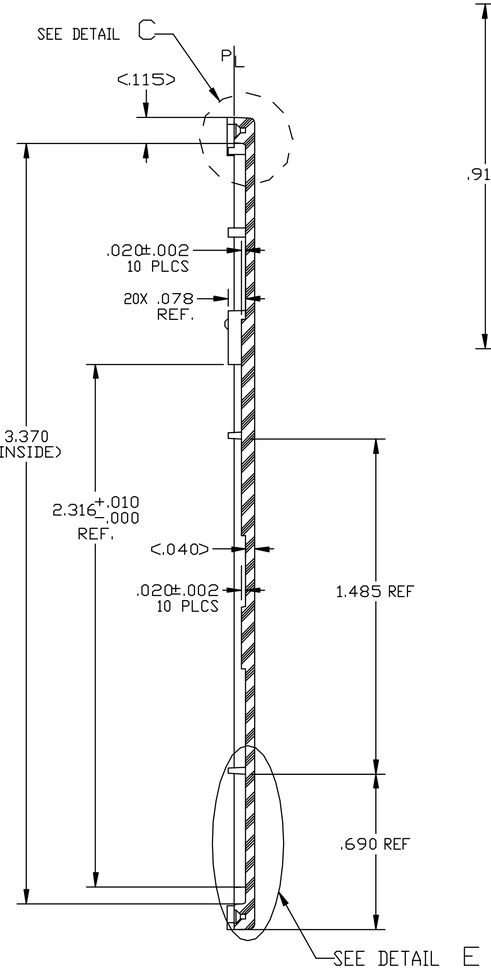
SIZE D | CAGE NO. 79986 | DWG. NO. 32011937 | REV. B
SCALE 2/1 | SHEET 1 OF 3

DWG. NO. 32011937 SH 1 REV. B

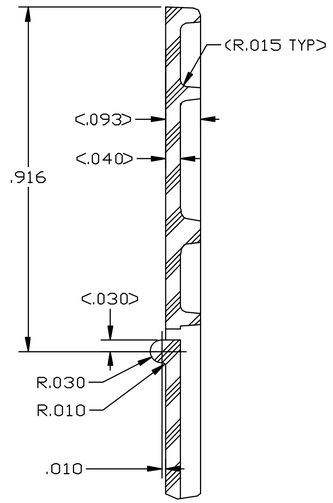
COMP FILE #32011937
PART BOTTOM_STRIP_TRAYS

\data\workflow\32011937.dwg DATE: 08-01-14 10:39 BY: john.call4

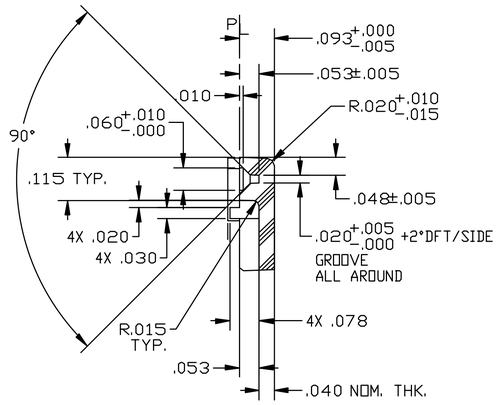
REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
B	REPLACES 32011937 SHT 2, DATED 00-06-13 NOR 245-0017-0020, 07-11-28	08-01-07	SM



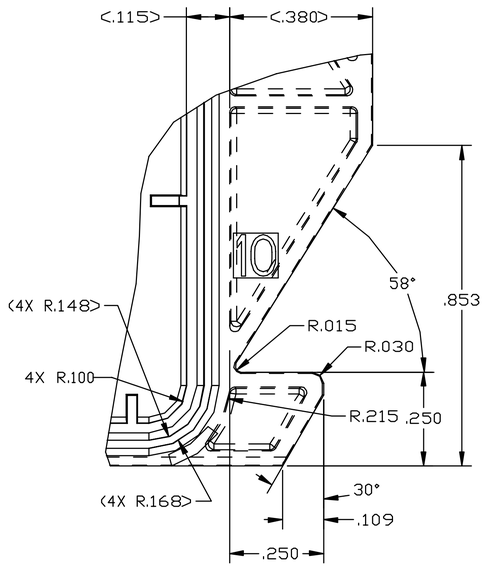
SECTION A-A



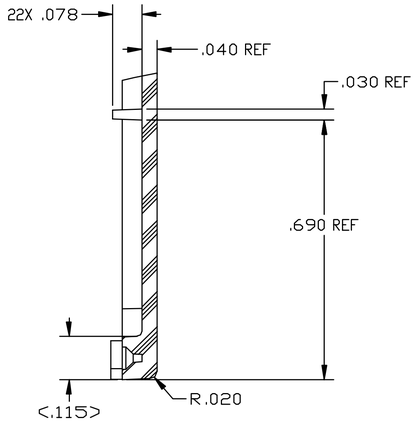
2X SECTION B-B
SCALE 5/1



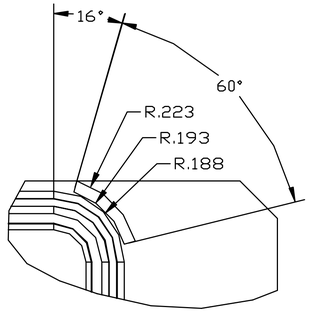
DETAIL C
SCALE 5/1



2X DETAIL D
SCALE 5/1



DETAIL E
SCALE 5/1



2X DETAIL H
SCALE 5/1

DISTRIBUTION STATEMENT D. DISTRIBUTION AUTHORIZED TO THE DEPARTMENT OF DEFENSE AND U.S. DOD CONTRACTORS ONLY; CRITICAL TECHNOLOGY; DETERMINATION MADE 07-11-28. OTHER REQUESTS SHALL BE REFERRED TO DEPARTMENT OF THE ARMY, JPEO FOR CHEMICAL BIOLOGICAL DEFENSE, OFFICE OF JPM FOR BIOLOGICAL DEFENSE SYSTEMS, ATTN: SFAE-CBD-BD-BDS, APG, MARYLAND 21010-5424.

DESTRUCTION NOTICE – DESTROY BY ANY METHOD THAT WILL PREVENT DISCLOSURE OF CONTENTS OR RECONSTRUCTION OF THE DOCUMENT.

WARNING – THIS DOCUMENT CONTAINS TECHNICAL DATA WHOSE EXPORT IS RESTRICTED BY THE ARMS EXPORT CONTROL ACT (TITLE 22, U.S.C., SEC 2751, et. seq.) OR THE EXPORT ADMINISTRATION ACT OF 1979, AS AMENDED, TITLE 50, U.S.C., APP. 2401 et. seq. VIOLATIONS OF THESE EXPORT LAWS ARE SUBJECT TO SEVERE CRIMINAL PENALTIES. DISSEMINATE IN ACCORDANCE WITH PROVISIONS OF DOD DIRECTIVE 5230.25.

COMP. FILE #32011937_PART_BOTTOM_STRIP_TRAYS

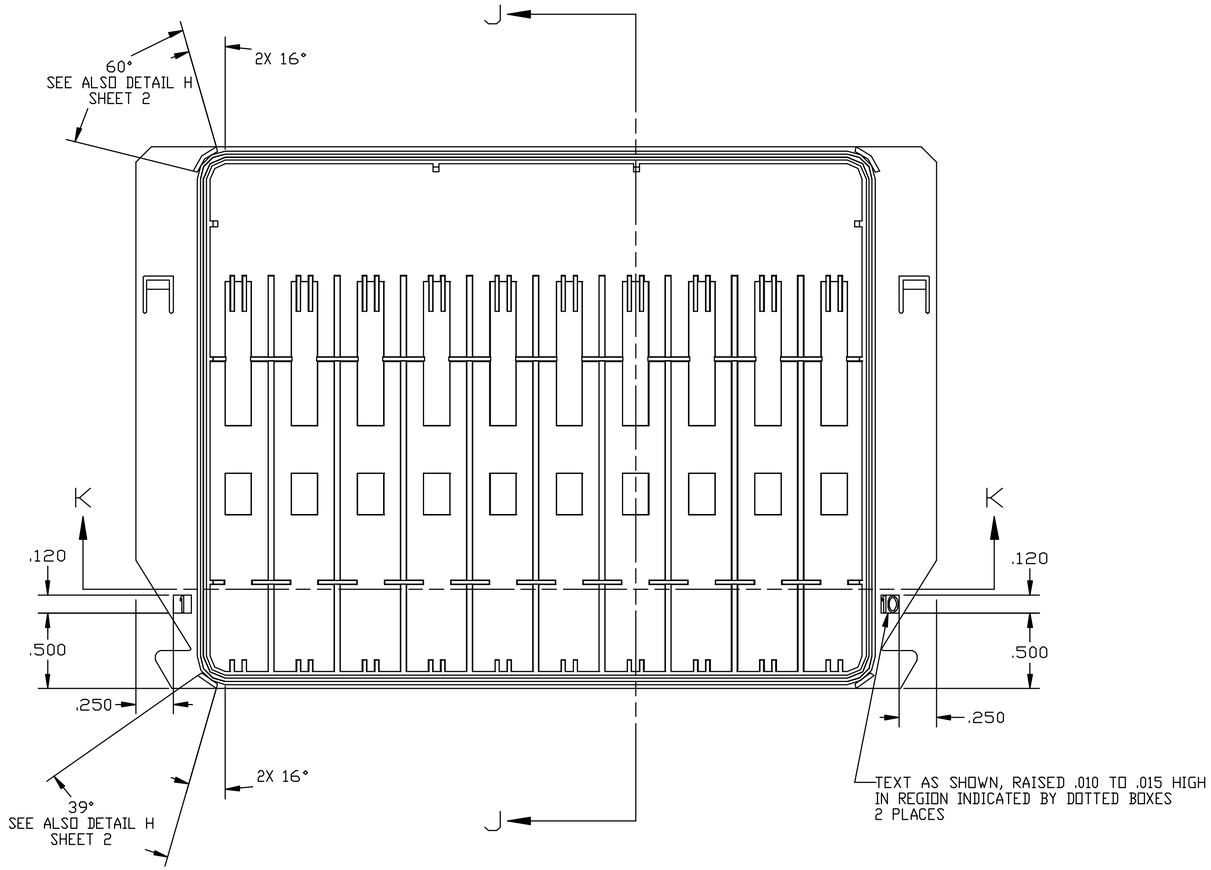
CURRENT DESIGN ACTIVITY CAGE CODE 81361
U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

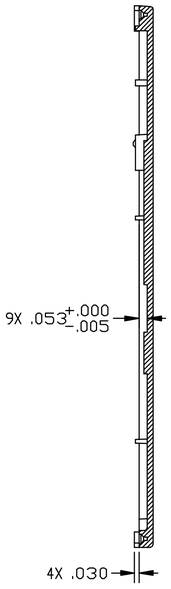
SIZE	CAGE NO.	DWG. NO.
D	79986	32011937
SCALE 3/1		SHEET 2 OF 3

DWG. NO. 32011937 SH 2 REV. B

\\data\workflow\32011937S002.dwg DATE: 08-01-14 11:08 BY: john.call4

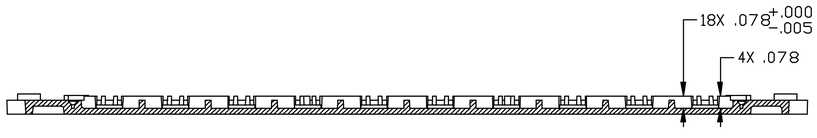
REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
B	REPLACES 32011937 SHT 3, DATED 00-06-13 NOR 245-0017-0020, 07-11-28	08-01-07	SM





SECTION J-J

TEXT AS SHOWN, RAISED .010 TO .015 HIGH
IN REGION INDICATED BY DOTTED BOXES
2 PLACES



SECTION K-K

DISTRIBUTION STATEMENT D. DISTRIBUTION AUTHORIZED TO THE DEPARTMENT OF DEFENSE AND U.S. DOD CONTRACTORS ONLY; CRITICAL TECHNOLOGY; DETERMINATION MADE 07-11-28. OTHER REQUESTS SHALL BE REFERRED TO DEPARTMENT OF THE ARMY, JPEO FOR CHEMICAL BIOLOGICAL DEFENSE, OFFICE OF JPM FOR BIOLOGICAL DEFENSE SYSTEMS, ATTN: SFAE-CBD-BD-BDS, APG, MARYLAND 21010-5424.

DESTRUCTION NOTICE – DESTROY BY ANY METHOD THAT WILL PREVENT DISCLOSURE OF CONTENTS OR RECONSTRUCTION OF THE DOCUMENT.

WARNING – THIS DOCUMENT CONTAINS TECHNICAL DATA WHOSE EXPORT IS RESTRICTED BY THE ARMS EXPORT CONTROL ACT (TITLE 22, U.S.C., SEC 2751, et. seq.) OR THE EXPORT ADMINISTRATION ACT OF 1979, AS AMENDED, TITLE 50, U.S.C., APP. 2401 et. seq. VIOLATIONS OF THESE EXPORT LAWS ARE SUBJECT TO SEVERE CRIMINAL PENALTIES. DISSEMINATE IN ACCORDANCE WITH PROVISIONS OF DOD DIRECTIVE 5230.25.

COMP. FILE #32011937
PART BOTTOM_STRIP_TRAYS

CURRENT DESIGN ACTIVITY CAGE CODE 81361
U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

SIZE	CAGE NO.	DWG. NO.
D	79986	32011937
SCALE 2/1		SHEET 3 OF 3

DWG. NO. 32011937 SH 3 REV. B

APPLICATION		REVISIONS			
NEXT ASSY.	USED ON	REV.	DESCRIPTION	DATE	APPROVED
32011932	JBPDS	C	REPLACES 32014013 REV B, DATED 00-04-19 NOR 245-0017-0021, 07-11-28	08-01-09	SM

VENDOR ITEM DRAWING

EQUIPMENT CODE NO.		
244	247	
245	283	
246		

CURRENT DESIGN ACTIVITY CAGE CODE 81361
U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

REV STATUS OF SHEETS															
REV.	C	C													
SHEET	1	2													

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.
TOLERANCES ARE:
FRACTIONS DECIMALS ANGLES
±~ .XX±.05 ±~
.XXX±.005

DO NOT SCALE DRAWING

CONTRACT NO. DAAM01-97-C-0004

APPROVALS	YR-MO-DY
DWG. D.M. KEANE	98-02-12
CHK. S. E. Walker	
ENG. D.M. KEANE	

Battelle
... Putting Technology To Work
505 King Avenue, Columbus, OH 43201-2693
Telephone: 614-424-6424
Telex: 24-5454
Facsimile: 614-424-3776

TITLE DESICCANT, STRIP CARRIER

SIZE	CODE IDEN. NO.	DWG. NO.	REV.
A	79986	32014013	C

SCALE NONE SHEET 1 OF 2

\data\workflow\32014013.dwg DATE: 08-01-11 7:38 BY: john.call4

1.0 SCOPE.
The desiccant is a substance used to maintain a dry environment inside the Carrier Assembly, Assay Strip. The part is a single strip composed of 3 packets. Each packet is filled with 0.25 grams of indicating silica gel desiccant. The part is considered commercial-off-the-shelf.

2.0 APPLICABLE DOCUMENTS.

3.0 REQUIREMENTS.

4.0 QUALITY ASSURANCE PROVISIONS
Certificate of Conformance.
Provisions above and beyond the manufacturer's best practices are not required.

5.0 PREPARATION FOR DELIVERY

6.0 NOTES
The desiccant has a shelf life of 1 year if stored in a cool, dry location.

6.1 INTENDED USE.
The desiccant is used to maintain a dry environment inside the Carrier Assembly, Assay Strip.

6.2 DRAWING DATA.
See Appendix A for hard copy data.

6.3 SOURCES. IDENTIFICATION OF THE SUGGESTED ITEMS HEREON IS NOT TO BE CONSTRUED AS A GUARANTEE OF PRESENT OR CONTINUED AVAILABILITY.

ADDENDUM

SUGGESTED SOURCES OF SUPPLY

Drawing Dash No.	Nomenclature	Supplier Code Ident No.	Supplier Part No.	Supplier Name and Address
-001	StripPax® (Cut Packet, 3 Packets/Strip)	22627	02-01909CG01	Multisorb Technologies Buffalo, NY 14224

Example Part Number call out: 32014013-001

CURRENT DESIGN ACTIVITY CAGE CODE 81361
U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

SIZE	CODE IDEN. NO.	DWG. NO.	REV.
A	79986	32014013	C
SCALE NONE			SHEET 2

NOT APPLICABLE TO INTERPLANT SHIPMENT (A)

SPECIAL PACKAGING INSTRUCTION(SPI)

NATIONAL STOCK NUMBER
6665–01–525–7010

NOMENCLATURE	UI	QUP	SPI NUMBER (PN)
Box Assembly, Carrier	BX (C)	20	P5–15–31917–50

Cleaning & Drying shall be in accordance with MIL–STD–2073–1

MILTARY PRESERVATION REQUIREMENT **(B)** (MIL–STD–2073–1, Method41)	STEPS	DRAWING OR SPECIFICATION	STYLE	TYPE	GRADE	CLASS	SIZE AND REMARKS (INCHES)
Cushioning	(D) 1	A–A–59135			A	1	12 x 20 x 1/8 thick
Unit Pack Container	(E) 2	MIL–DTL–117	1	I		E	12 x 14
Dessicant	(F) 3	MIL–D–3464		II			One (1) Unit
Unit Pack Container Closure	(G) 4						Heat Seal
Supplemental Container	(H) 5	ASTM D 5118	RSC		W5c	WR	8 x 6 x 4 ID
Supplemental Closure	(I) 6	ASTM D 1974					Sealing Method B
Cooler Top	(J) (N) 7						
Cooler Bottom	(K) (N) 8						
Cooler End	(L) (N) 9						
Cooler Side	(M)(N)10						
Cooler Assembly	(0)(P)11						
Cooler Loading	12						See Sketch, page 11
Cooler Pack Closure	13						See Sketch, page 13

INTERMEDIATE MILITARY PRESERVATION AND PACKING
☐ In accordance with MIL–STD–2073–1
☒ As specified hereon. **See note (Q)**

MARKING
☒ In accordance with MIL–STD–129 **AND NOTE(R)**
☐ As specified hereon.

QUALITY PERFORMANCE AND TESTING REQUIREMENTS
☒ In accordance with MIL–STD–2073–1 **AND NOTES (S)**
☐ As specified hereon.

Unless otherwise specified, materials shall be minimum size in accordance with MIL–STD–2073–1. Tolerances shall be in accordance with material specifications.

UNIT PACK LOGISTICS DATA (Approximate unit packi weight and size)

Level	WEIGHT (POUNDS)	CUBE (CUBIC FEET)	SIZE (EXTERIOR FEET)
A	12.42 lbs	4.231 cu. ft.	2.77 x 1.34 x 1.14

REMARKS/ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.

(A) – THIS SPI IS NOT APPLICABLE FOR INTERPLANT SHIPMENTS. Packaging and marking for interplant shipment is for supplies and materials that do not directly enter the military supply system. Typical interplant shipments are shipments from a vendor to a subcontractor or a prime contractor, or between contractors and subcontractors, or from a vendor or contractor to a military arsenal, plant, or other activity for evaluation, immediate use, or further processing as specified in the applicable contract.

(B) – The components, that make up the Box Assembly, Carrier shall be as specified on drawing 5–15–31917–50

ITEM DATA (APPROX)
ITEM CODE – 244, 245, 246, 247, 283
ITEM SIZE – 6 3/8 x 4 1/2 x 3 1/8
ITEM WEIGHT – .30 lbs

*Original Preparer*Dean Hansen
ECBC 81361
AMSRD–ECB–ENA–P

Revised by:

PAGE NUMBER	NUMBER OF PAGES
1	14

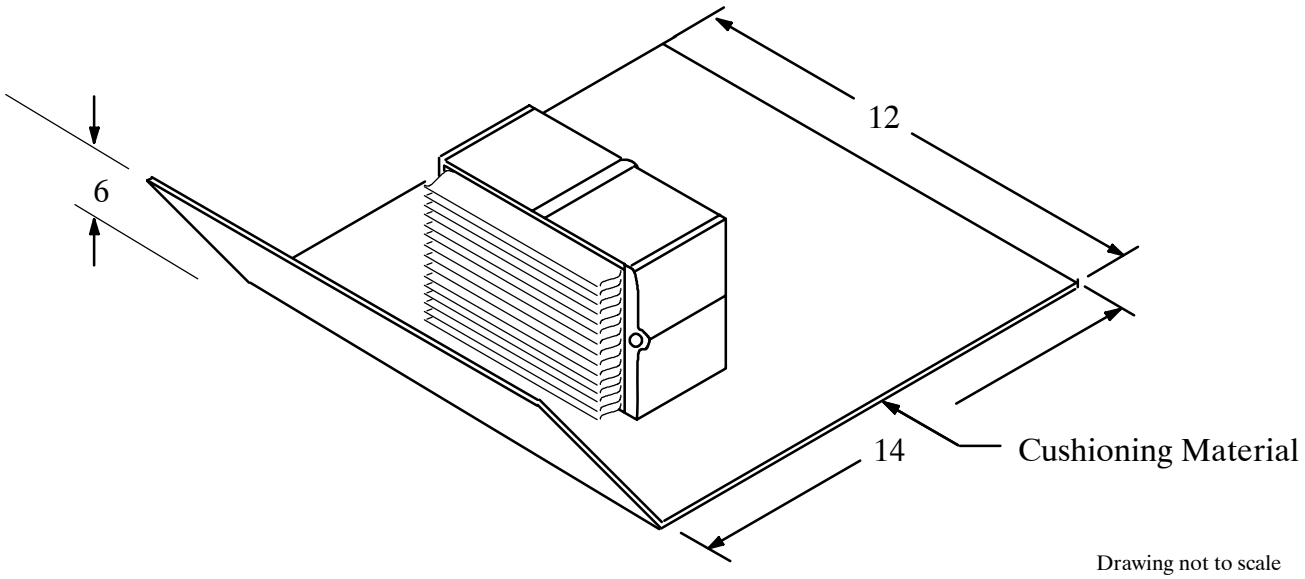
APPROVAL	REVISION	DATE
DVH 245–0017–013	–	30 Nov 07

DISTRIBUTION STATEMENT A: Approved for public release, distribution unlimited.

(C) – The unit of issue is box. The unit of measure for this pack is 20 Box Assembly, Carriers per exterior shipping container. Because the carrier assemblies need special environmental protection they shall not be shipped without the all packaging as specified on this SPI, including the cooler pack as their exterior shipping container.

(D) – Start the wrap by covering the open face of the Box Assembly, Carriers with one 12 inch wide end of the cushioning material parallel to the top or bottom of the open face, and wrap to obtain a maximum number of cushioning layers across the open face. (See sketch on page 2) Secure wrap with tape conforming to ASTM D5486, Type I, class 1 or 2. Ensure that corners of wrapped item are securely taped. Tape shall not contact item.

PLACEMENT OF BAGGED BOX ASSEMBLY CARRIER IN CUSHIONING



Drawing not to scale
For Reference only

(E) – Place the cushioned and taped Box Assembly, Carriers in bag.

(F) – Desiccant shall be placed in the barrier bag step 2 of this SPI. The desiccant shall be 1 unit bag and conform to MIL–D–3464 type I or II. In addition place one humidity indicator card that covers a range of 10, 20, 30, 40, 50 and 60% and conforms to MIL–I–8835 into the bag. As an alternative a commercially available humidity indicator that covers a range of 10, 20, 30, 40, 50 and 60% may be substituted.

(G) – Closure of the barrier bag shall be accomplished by heat sealing. Heat sealing shall be accomplished in accordance with the barrier bag manufactures instructions. Excess air shall be removed from the barrier bag prior to heat sealing.

(H) – Place the bagged and cushioned Box Assembly Carrier into the supplemental container step 5 of this SPI. Staples shall not be used for the assembly of the supplemental container.

(I) – The closure of the supplemental container shall be in accordance with step 6 of this SPI. Staples shall not be used for the closure.

(J) – Fabricate the cooler top as shown on page 4 of this SPI. See step 7.

(K) – Fabricate the cooler bottom as shown on page 4 of this SPI. See step 8.

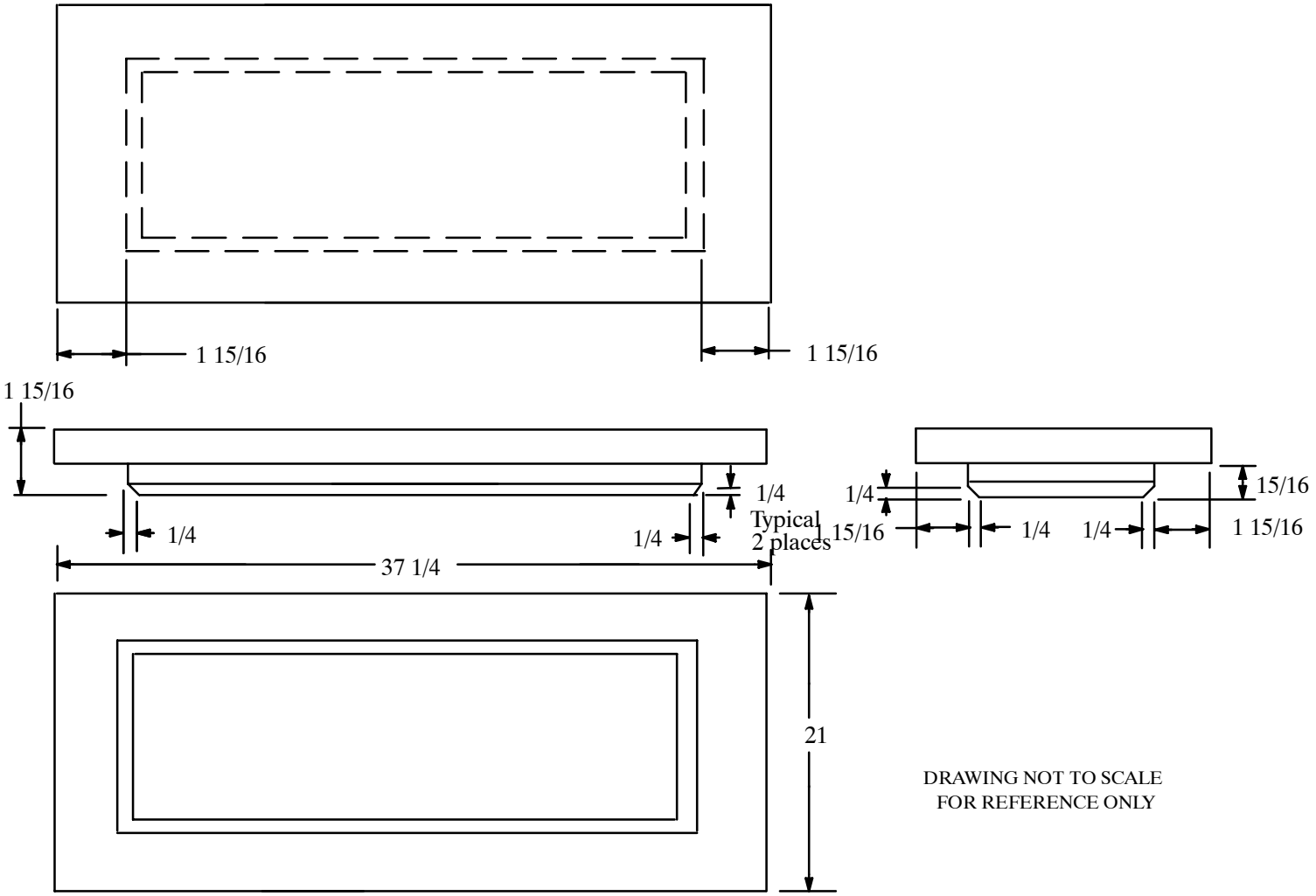
(L) – Fabricate the cooler end as shown on page 5 of this SPI. See step 9.

(M) – Fabricate the cooler sides as shown on page 5 of this SPI. See step 10.

(N) – Polystyrene material used in the Intermediate pack. Material used for the intermediate cooler pack shall be 2.8 to 3.2 lbs density per cubic foot Polyethylene. The cooler pack shall be assembled in accordance with the sketch on page 6 of this SPI. The R or thermal value of the material used for the cooler pack shall be not less than 3.5 R–Value per 1 inch thickness of material. The standard tolerance for material shall be (+–) .09 inches. Suggested source of supply for the Polystyrene components of this pack is: FPM Expandable Polystyrene, 2053 Commerce Street, Lancaster, Ohio 43130, Phone number (740) 687–5934.

COOLER TOP AND BOTTOM

(2 Required)

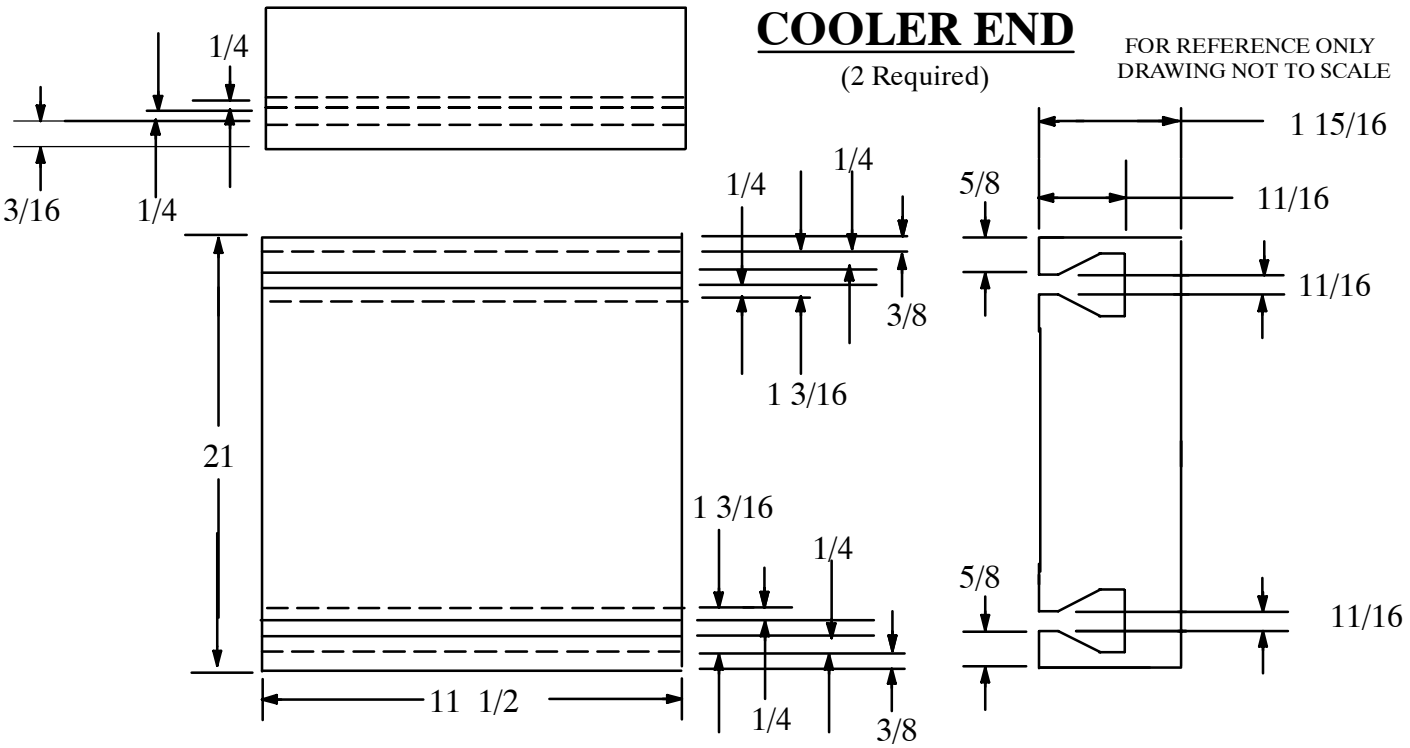


DRAWING NOT TO SCALE
FOR REFERENCE ONLY

COOLER END

(2 Required)

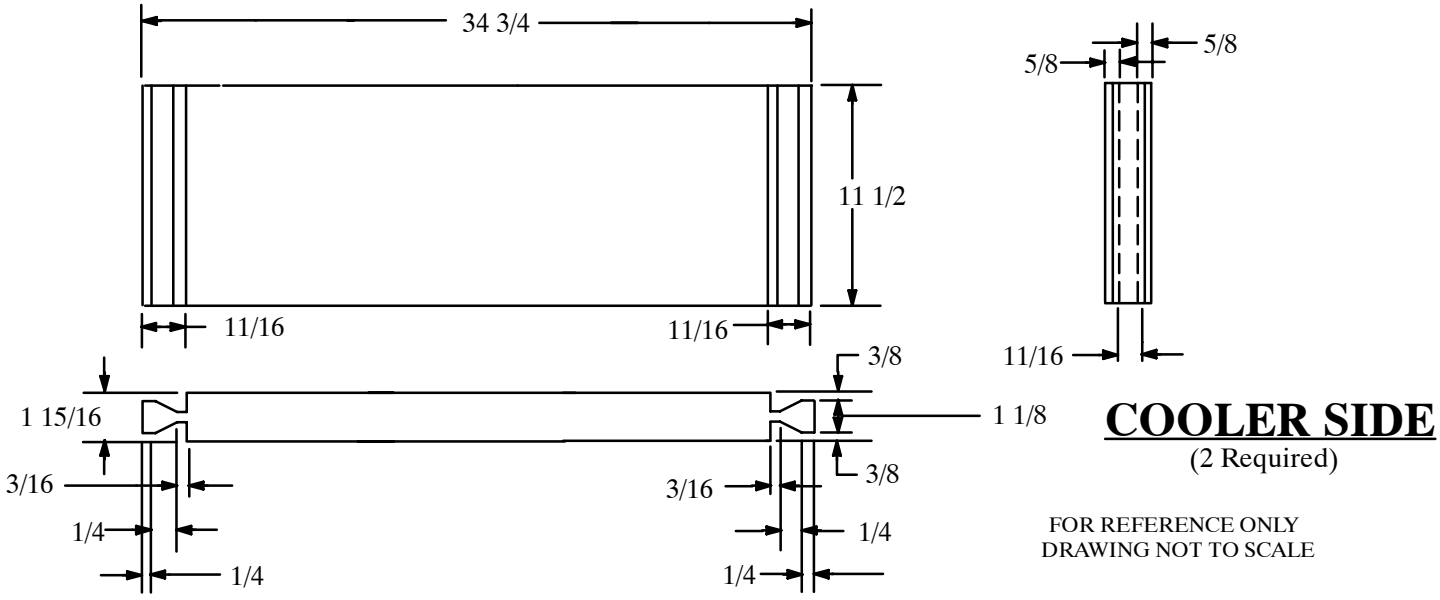
FOR REFERENCE ONLY
DRAWING NOT TO SCALE



COOLER SIDE

(2 Required)

FOR REFERENCE ONLY
DRAWING NOT TO SCALE



(O) – Coating of the cooler pack assembly. The cooler pack shall have its exterior surfaces coated as shown on pages 6 through 9 of this SPI. The coating shall be a minimum of 30 to 40 thousands of an inch thickness. The coating shall be as follows:
A polyurea coating either Olive Drab Green or Sand in Color. The cured stress/Tensile shall be between 2800 to 3000 psi. The cured Elongation @25 degrees C shall be between 350 and 375%. The cured Hardness shall be 90 Shore A. The cured Tear Strength Ply shall be a minimum of 400 PLI, When cured the thermal shock shall e a minimum of –65 degrees F with no effect.. When cured the impact notched shall be a minimum of 65 in–lbs./in. A suggest product that has demonstrated these requirements is InstaCote M–25. The Manufactures information is as follows:
InstaCoat, 160 C. Lavoy Rd., Erie, Michigan, USA 48133, Phone (734) 847–5260.

COATING APPLICATION AREAS TOP AND BOTTOM

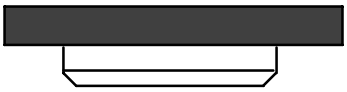
OUTSIDE TOP VIEW

AREAS SHOWN LIKE THIS ARE COATED

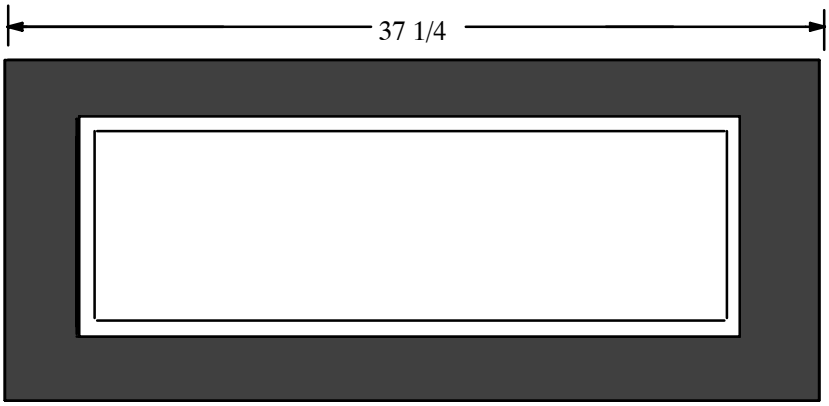
AREAS SHOWN LIKE THIS ARE NOT COATED

SIDE VIEW

END VIEW



INSIDE VIEW



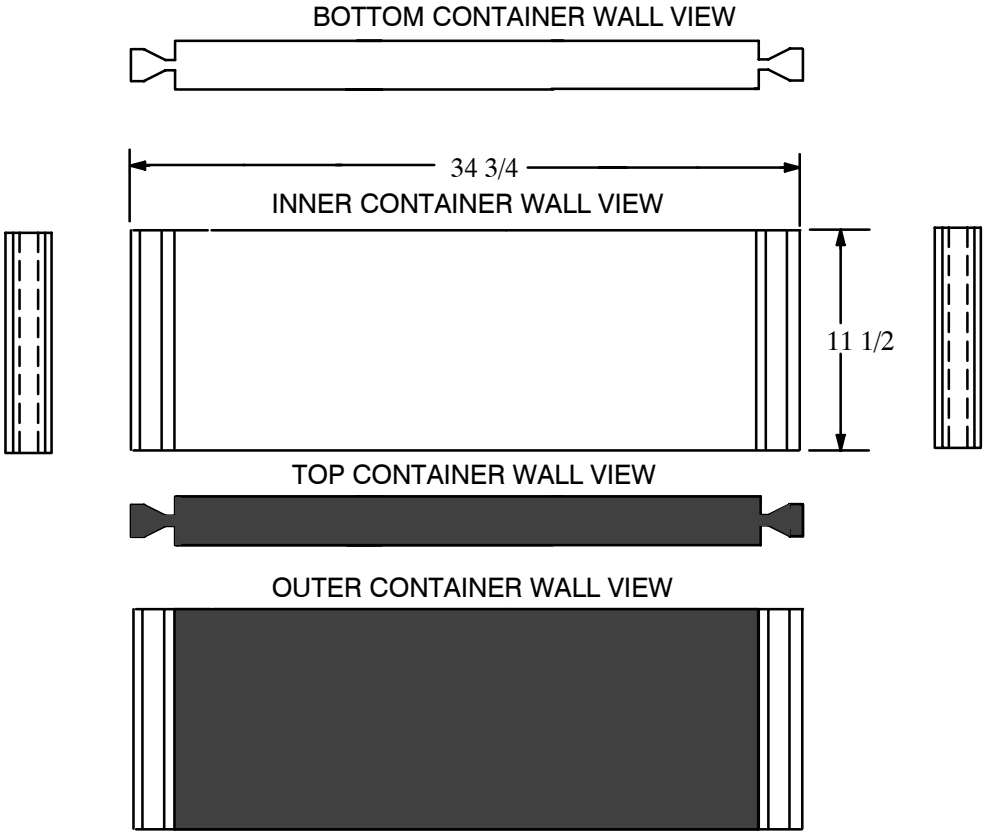
DRAWING NOT TO SCALE
FOR REFERENCE ONLY

NOTES:

THE CONTAINERS TOPS AND BOTTOMS CAN BE COATED BEFORE OR AFTER ASSEMBLY
INSIDE REFERS TO INSIDE SURFACE OF THE CONTAINER AFTER ASEMBLY
OUTSIDE REFERS TO THE OUTER SURFACE OF THE CONTAINER AFTER ASSEMBLY

COOLER SIDE

(2 Required)



FOR REFERENCE ONLY
DRAWING NOT TO SCALE

AREAS SHOWN LIKE THIS ARE NOT COATED

AREAS SHOWN LIKE THIS ARE COATED

NOTES:

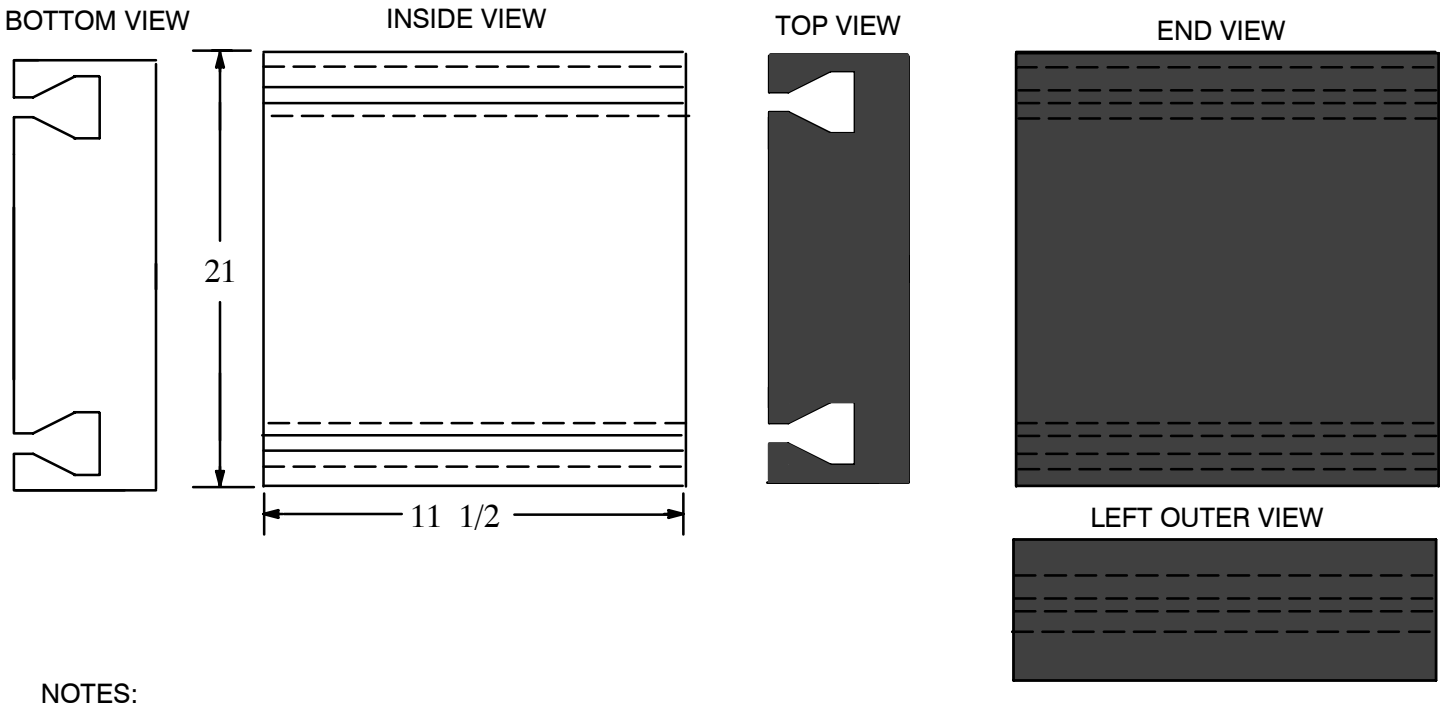
THE CONTAINER SIDES SHALL BE COATED AFTER ASSEMBLY
INSIDE REFERS TO INSIDE SURFACE OF THE CONTAINER AFTER ASEMBLY
OUTSIDE REFERS TO THE OUTER SURFACE OF THE CONTAINER AFTER ASSEMBLY

COATING APPLICATION AREAS OF THE COOLER ENDS

(2 Required)

AREAS SHOWN LIKE THIS ARE NOT COATED

AREAS SHOWN LIKE THIS ARE COATED



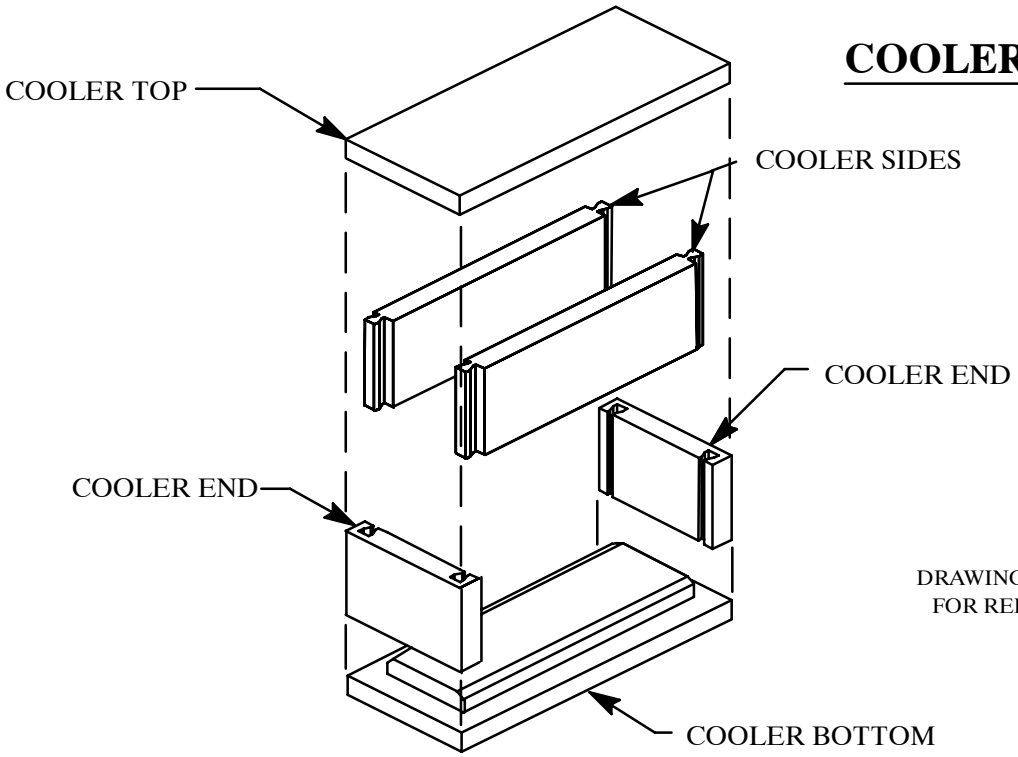
NOTES:

THE CONTAINER ENDS SHALL BE COATED AFTER ASSEMBLY
INSIDE REFERS TO INSIDE SURFACE OF THE CONTAINER AFTER ASEMBLY
OUTSIDE REFERS TO THE OUTER SURFACE OF THE CONTAINER AFTER ASSEMBLY

DRAWING NOT TO SCALE
FOR REFERENCE ONLY

(P) – Assemble the cooler pack as shown in this sketch.

COOLER PACK ASSEMBLY



DRAWING NOT TO SCALE
FOR REFERENCE ONLY

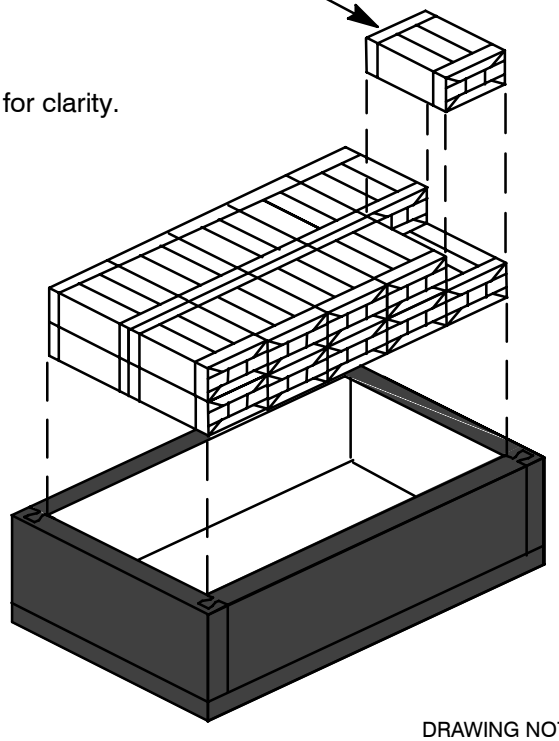
NOTE:
APPLY COMMERCIAL SILICON SEALANT (WHITE OR CLEAR IN COLOR) AT ALL INSIDE SEAMS OF CONTAINER DURING ASSEMBLY. TO INSURE A WATER PROOF SEAL. SEALANT SHALL NOT BE PLACED ON THE LID OF THE CONTAINER TO EFFECT A CLOSURE

PLACEMENT OF THE PACKED SUPPLEMENTAL CONTAINERS IN THE COOLER

Place 20 Box Assembly, Carriers packed in their Supplemental container as shown in this sketch. There shall be two layers of 10 Box Assembly Carriers as shown.

ONE BOX ASSEMBLY CARRIER PACKED IN THE SUPPLEMENTAL CONTAINER, STEP 5 OF THIS SPI

Cooler top not shown for clarity.



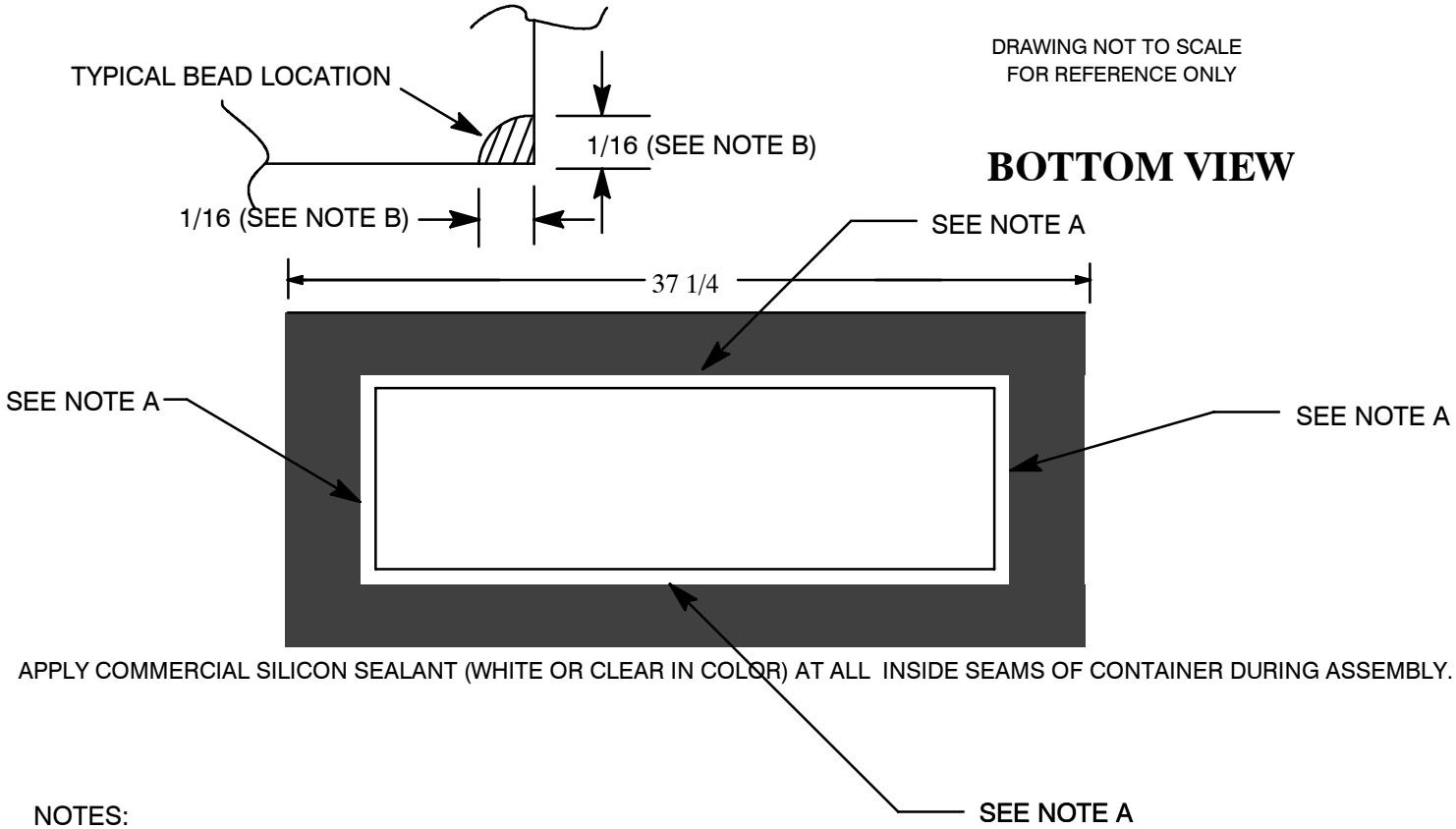
AREAS SHOWN LIKE THIS ARE COATED

AREAS SHOWN LIKE THIS ARE NOT COATED

DRAWING NOT TO SCALE
FOR REFERENCE ONLY

(Q) – Exterior Shipping Container. The Cooler box shall serve as the exterior shipping container. Because the carrier assemblies need special environmental protection they shall not be shipped without the all packaging as specified on this SPI. Intermediate packing is not required.

PLACEMENT OF SEALING BEAD IN COOLER PACK LID



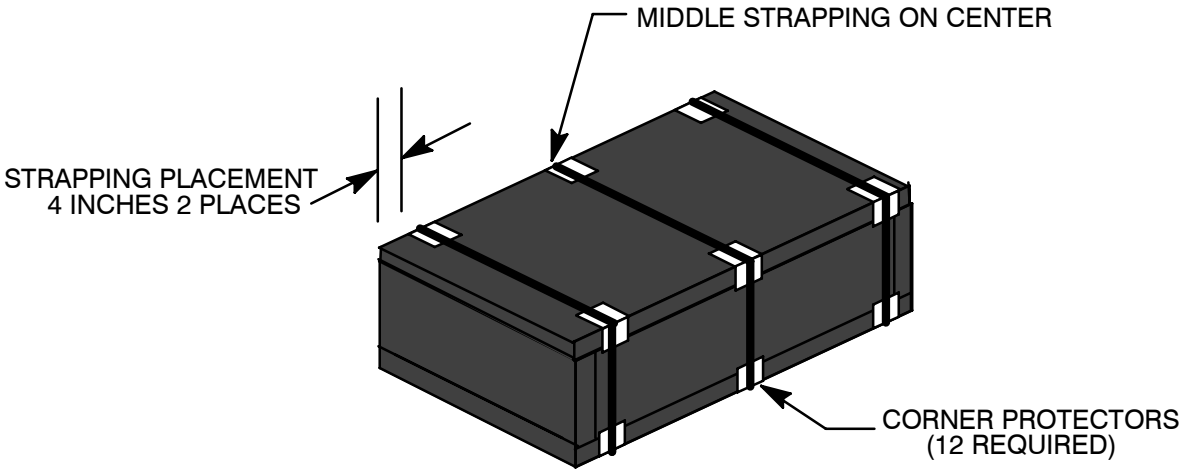
APPLY COMMERCIAL SILICON SEALANT (WHITE OR CLEAR IN COLOR) AT ALL INSIDE SEAMS OF CONTAINER DURING ASSEMBLY.

NOTES:

A. PRIOR TO PLACING THE LID IN PLACE, APPLY A BEAD OF CAULKING AROUND THE SEALING EDGE OF THE OF THE LID AS SHOWN. ALLOW THE BEAD TO CURE. FOLLOW THE CAULKING MANUFACTURES INSTRUCTIONS FOR THE APPLICATION OF THE CAULKING AND THE CURING TIME REQUIRED. THE CAULKING SHALL BE DRY AND SET BEFORE APPLYING THE LID TO THE BOX. THE CAULKING SHALL BE IN A COMMERCIAL SILICON SEALANT (WHITE OR CLEAR IN COLOR).

B. THE BEAD IS USED TO CREATE A SMALL INTERFERENCE FIT TO SEAL THE CONTAINER. MORE OR LESS BEAD MATERIAL IS AUTHORIZED AS LONG AS A SEAL IS ACCOMPLISHED UPON CLOSING.

COOLER BOX CLOSURE



Strapping of the Level A Shipping Container. Flat steel strapping shall be applied to the unit pack container as shown in the sketch above. Three straps are required. The strapping shall be placed as shown in the sketch above. Strapping shall be Type 1, Heavy Duty, Finish B, Grade 2, minimum 5/8 inches in width x 0.023 inches in thickness length as required. The metal seals shall be of the correct size, Heavy duty, Finish B, Grade 2, Style any. Both strapping and seals shall be in accordance with ASTM D 3953. Once tensioned, the steel strappings shall be secured with metal seals of the correct size to effect a strong closure.

DRAWING NOT TO SCALE
FOR REFERENCE ONLY

(R) – In addition to the marking requirements of MIL–STD–129 the following markings shall be applied to each carrier assembly fiberboard containers (step 6) :

a. Manufacture Date
b. Expiration Date
c. Lot Number
d. Shelf Life markings
e. Special Marking:
. **"PROTECT FROM FREEZING."**

In addition to the marking requirements of MIL–STD–129 the following markings shall be applied to the exterior shipping container:

a. Manufacture Date
b. Expiration Date
c. Lot Number
d. Shelf Life markings

e. Special marking

"PROTECT FROM FREEZING

TEMPERATURE SENSITIVE MATERIAL
EXPEDITE SHIPMENT AND MOVEMENT
APPLY TEMPERATURE CONTROL AT FINAL DESTINATION"

The additional special marking as shown in (Q) e. above, shall be marked in red print at least 48 point and placed on the marking side of the exterior shipping container. If there is not enough room on the marking side of the container. The label shall then placed on the top of the exterior shipping container.

(S) –PACKAGING QUALITY PERFORMANCE AND TESTING REQUIREMENTS

1. Classification of inspections. The inspection requirements for the packaged item described herein are classified as follows:
   (a) First article inspection
   (b) Conformance inspection
2. First Article inspection. The first article inspection and approval consists of the Contractor inspection of items prior to regular production.
   (a) Sampling. The first article packaging sample shall consist of not less than three unit pack containers and their contents, and when heat seal seam testing is required, three empty barrier bags. Packaged samples shall be taken from the quantity of first article sample items specified in QAP5–15–31917. Packaged samples shall be produced using the same methods, materials and equipment as will be used during regular production.
   (b) Examination. The packaged sample shall be examined in accordance with the visual preservation examinations (Table G–1) and the packing inspection examination procedures in Appendix G of MIL–STD–2073–1.
   (c) Leakage and heat seal seam tests. Sealed containers (in accordance with Method 41) shall be leak tested as specified in Appendix G of MIL–STD–2073–1. Sample barrier bags shall be destructively tested in accordance with the applicable heat seal seam test requirements in Appendix G of MIL–STD–2073–1. Testing of the barrier bag for Heat Seal Seam strength and leakage is required.
   (d) Acceptance criteria. First article samples that fail to comply with any of the applicable requirements shall be rejected.
3. Conformance Inspection.
   (a) Sampling. Sampling size shall be in accordance with the Attributes Sampling Plan Table of MIL–STD–1916. For examinations and leakage tests, Verification Level I shall be used. When heat seal seam tests are required, Verification Level II shall be used. Existing sampling plans in item specifications or quality assurance provisions shall take precedence.
4. Classification of characteristics. Quality conformance examinations and tests shall be as specified in Appendix G of MIL–STD–2073–1.

NOT APPLICABLE TO INTERPLANT SHIPMENT (A)

SPECIAL PACKAGING INSTRUCTION(SPI)

NATIONAL STOCK NUMBER
6665–01–525–7009

NOMENCLATURE	UI	QUP	SPI NUMBER (PN)
Box Assembly, Carrier	BX (C)	8 (C)	P5–15–31917–40

Cleaning & Drying shall be in accordance with MIL–STD–2073–1

MILTARY PRESERVATION REQUIREMENT (B) (MIL–STD–2073–1, Method41)	STEPS	DRAWING OR SPECIFICATION	STYLE	TYPE	GRADE	CLASS	SIZE AND REMARKS (INCHES)
Cushioning	(D) 1	A–A–59135			A	1	12 x 20 x 1/8 thick
Container	(E) 2	MIL–DTL–117	1	I		E	12 x 14
Dessicant	(F) 3	MIL–D–3464		II			One (1) Unit
Closure	(G) 4						Heat Seal
Supplemental Container	(H) 5	ASTM D 5118	RSC		W5c	WR	8 x 6 x 4 ID
Supplemental Closure	(I) 6	ASTM D 1974					Sealing Method B
Cooler Top	(J) (N) 7						
Cooler Bottom	(K) (N) 8						
Cooler End	(L) (N) 9						
Cooler Side	(M)(N)10						
Cooler Assembly	(0)(P)11						
Cooler Loading	12						See Sketch, Page 11
Cooler Pack Closure	13						See Sketch, Page 13

INTERMEDIATE MILITARY PRESERVATION AND PACKING
☐ In accordance with MIL–STD–2073–1
☒ As specified hereon. **See note (Q)**

MARKING
☒ In accordance with MIL–STD–129 **AND NOTE(R)**
☐ As specified hereon.

QUALITY PERFORMANCE AND TESTING REQUIREMENTS
☒ In accordance with MIL–STD–2073–1 **AND NOTE (S)**
☐ As specified hereon.

Unless otherwise specified, materials shall be minimum size in accordance with MIL–STD–2073–1. Tolerances shall be in accordance with material specifications.

UNIT PACK LOGISTICS DATA (Approximate unit packi weight and size)

Level	WEIGHT (POUNDS)	CUBE (CUBIC FEET)	SIZE (EXTERIOR FEET)
A	9.80 lbs.	2.903 cu. ft.	2.47 x 1.04 x 1.13

REMARKS/ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.

(A) – THIS SPI IS NOT APPLICABLE FOR INTERPLANT SHIPMENTS. Packaging and marking for interplant shipment is for supplies and materials that do not directly enter the military supply system. Typical interplant shipments are shipments from a vendor to a subcontractor or a prime contractor, or between contractors and subcontractors, or from a vendor or contractor to a military arsenal, plant, or other activity for evaluation, immediate use, or further processing as specified in the applicable contract.

(B) – The components, that make up the Box Assembly, Carrier shall be as specified on drawing 5–15–31917–40.

ITEM DATA (APPROX)
ITEM CODE – 244, 245, 246, 247, 283
ITEM SIZE – 6 3/8 x 4 1/2 x 3 1/8
ITEM WEIGHT – .30 lbs

*Original Preparer*Dean Hansen
ECBC 81361
AMSRD–ECB–ENA–P

Revised by:

PAGE NUMBER	NUMBER OF PAGES
1	14

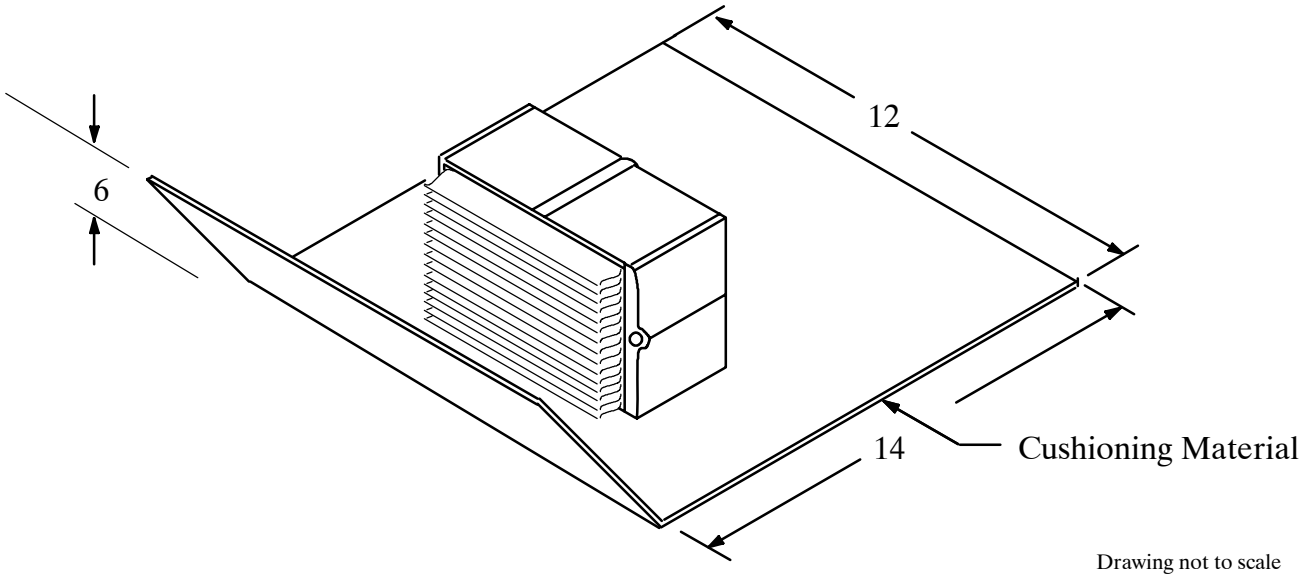
APPROVAL	REVISION	DATE
DVH 245–0017–012	–	30 Nov 07

DISTRIBUTION STATEMENT A: Approved for public release, distribution unlimited.

(C) – The unit of issue is box. The unit of measure for this pack is 8 Box Assembly, Carriers per unit pack container.

(D) – Start the wrap by covering the open face of the Box Assembly, Carriers with one 12 inch wide end of the cushioning material parallel to the top or bottom of the open face, and wrap to obtain a maximum number of cushioning layers across the open face. (See sketch on page 2) Secure wrap with tape conforming to ASTM D5486, Type I, class 1 or 2. Ensure that corners of wrapped item are securely taped. Tape shall not contact item.

PLACEMENT OF BAGGED BOX ASSEMBLY CARRIER IN CUSHIONING



Drawing not to scale
For Reference only

(E) – Place the cushioned and taped Box Assembly, Carriers in bag.

(F) – Desiccant shall be placed in the barrier bag step 2 of this SPI. The desiccant shall be 1 unit bag and conform to MIL–D–3464 type I or II. In addition place one humidity indicator card that covers a range of 10, 20, 30, 40, 50 and 60% and conforms to MIL–I–8835 into the bag. As an alternative a commercially available humidity indicator that covers a range of 10, 20, 30, 40, 50 and 60% may be substituted.

(G) – Closure of the barrier bag shall be accomplished by heat sealing. Heat sealing shall be accomplished in accordance with the barrier bag manufactures instructions. Excess air shall be removed from the barrier bag prior to heat sealing.

(H) – Place the bagged and cushioned Box Assembly Carrier into the supplemental container step 5 of this SPI. Staples shall not be used for the assembly of the supplemental container.

(I) – The closure of the supplemental container shall be in accordance with step 6 of this SPI. Staples shall not be used for the closure.

(J) – Fabricate the cooler top as shown on page 4 of this SPI. See step 7.

(K) – Fabricate the cooler bottom as shown on page 4 of this SPI. See step 8.

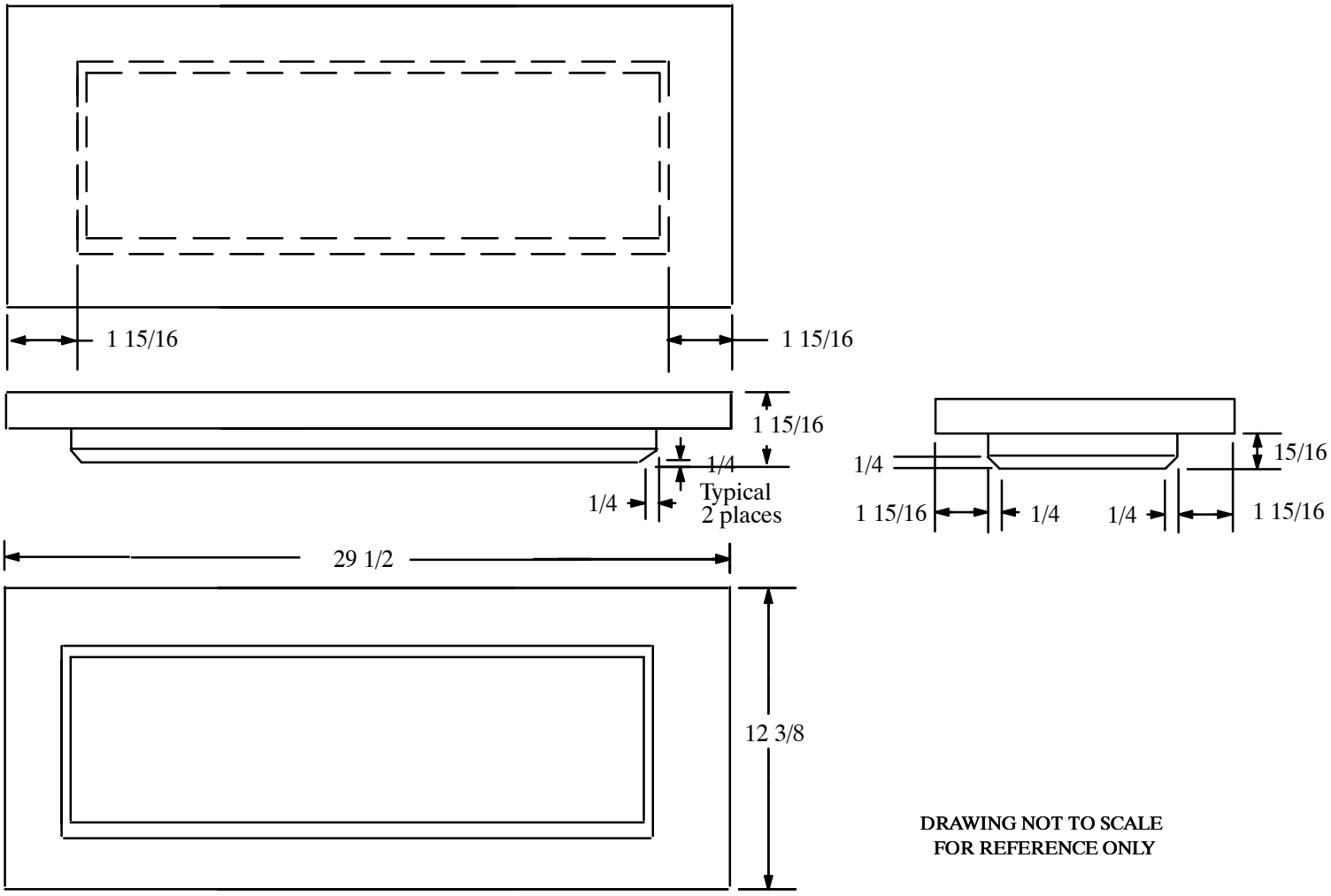
(L) – Fabricate the cooler end as shown on page 5 of this SPI. See step 9.

(M) – Fabricate the cooler Sides as shown on page 5 of this SPI. See step 10.

(N) – Polystyrene material used in the Intermediate pack. Material used for the intermediate cooler pack shall be 1.8 to 2.2 lbs density per cubic foot Polystyrene . The cooler pack shall be assembled in accordance with the sketch on page 6 of this SPI. The R or thermal value of the material used for the cooler pack shall be not less than 4.3 R–Value per 1 inch thickness of material. The standard tolerance for material shall be (+–) .09 inches. Suggested source of supply for the Polystyrene components of this pack is: FPM Expandable Polystyrene, 2053 Commerce Street, Lancaster, Ohio 43130, Phone number (740) 687–5934.

COOLER TOP AND BOTTOM

(2 Required)

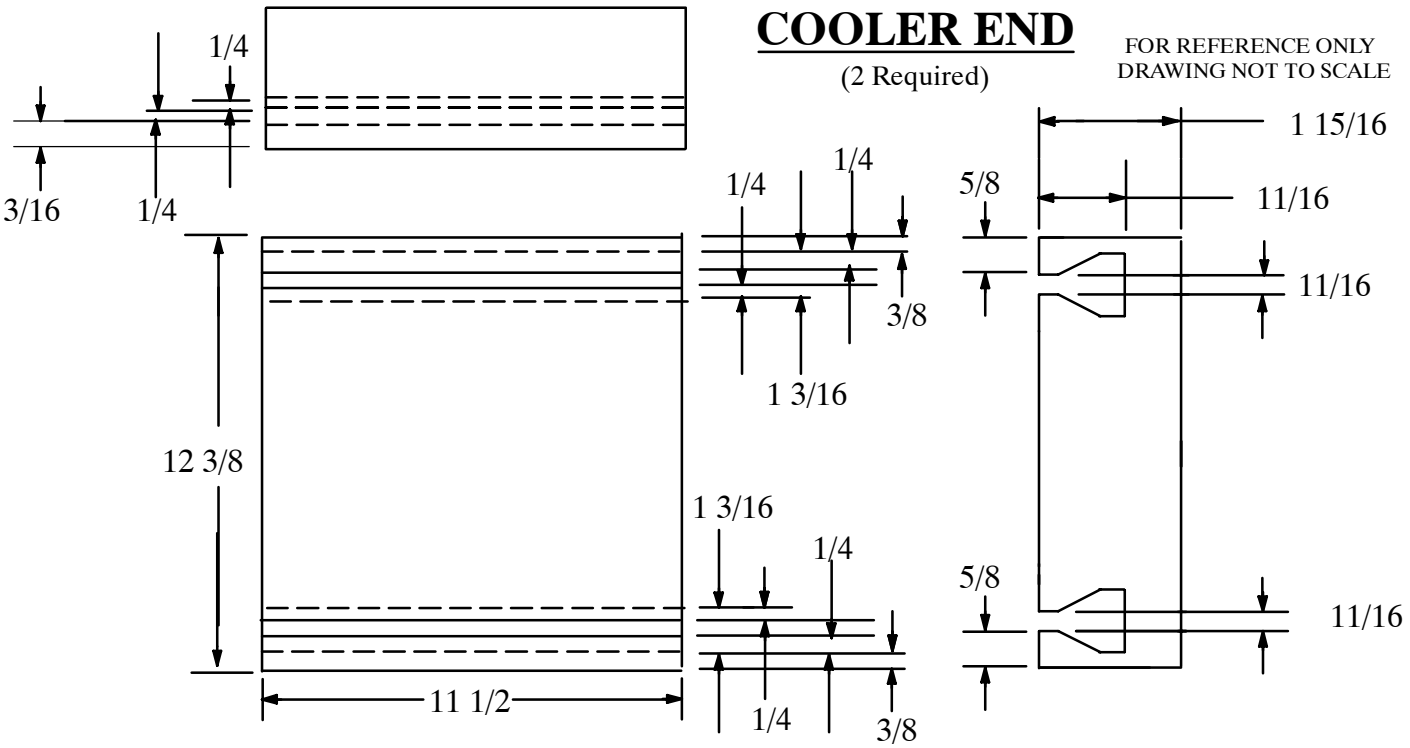


DRAWING NOT TO SCALE
FOR REFERENCE ONLY

COOLER END

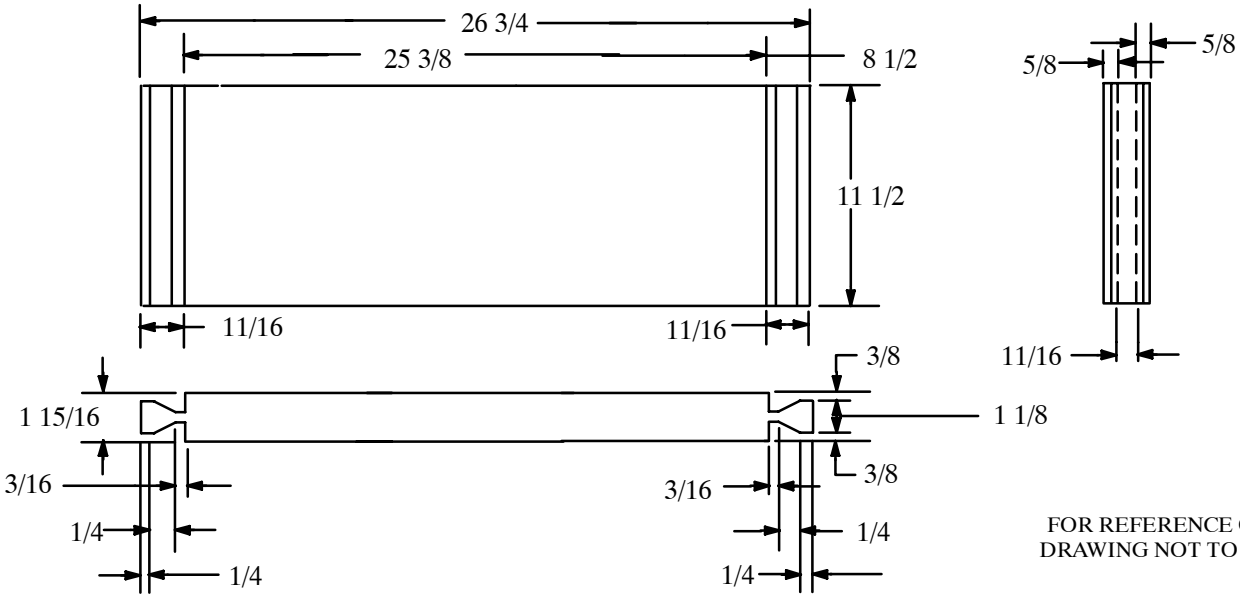
(2 Required)

FOR REFERENCE ONLY
DRAWING NOT TO SCALE



COOLER SIDE

(2 Required)



FOR REFERENCE ONLY
DRAWING NOT TO SCALE

(O) – Coating of the cooler pack assembly. The cooler pack shall have its exterior surfaces coated as shown on pages 6 through 9 of this SPI. The coating shall be a minimum of 30 to 40 thousands of an inch thickness. The coating shall be as follows:
A polyurea coating either Olive Drab Green or Sand in Color. The cured stress/Tensile shall be between 2800 to 3000 psi. The cured Elongation @25 degrees C shall be between 350 and 375%. The cured Hardness shall be 90 Shore A. The cured Tear Strength Ply shall be a minimum of 400 PLI, When cured the thermal shock shall e a minimum of –65 degrees F with no effect.. When cured the impact notched shall be a minimum of 65 in–lbs./in. A suggest product that has demonstrated these requirements is InstaCote M–25. The Manufactures information is as follows:
InstaCoat, 160 C. Lavoy Rd., Erie, Michigan, USA 48133, Phone (734) 847–5260.

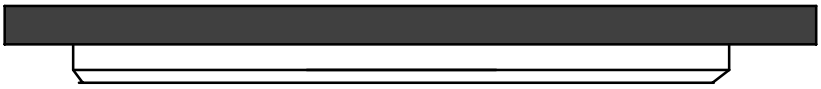
COATING APPLICATION AREAS TOP AND BOTTOM

OUTSIDE TOP VIEW

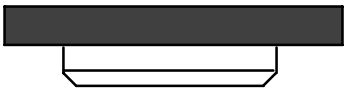
AREAS SHOWN LIKE THIS ARE COATED

AREAS SHOWN LIKE THIS ARE NOT COATED

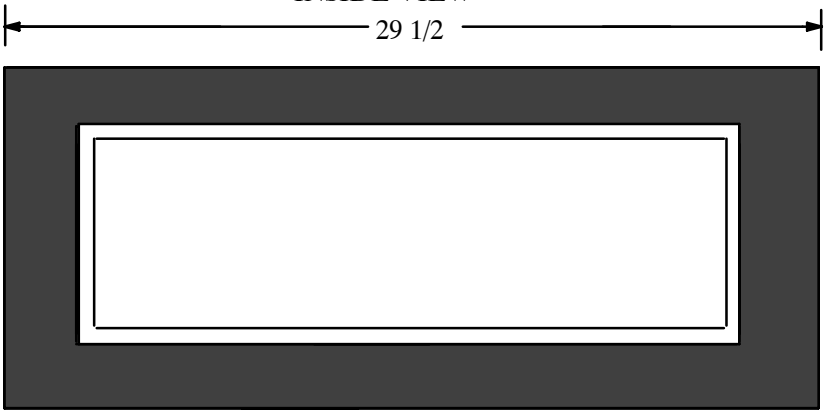
SIDE VIEW



END VIEW



INSIDE VIEW



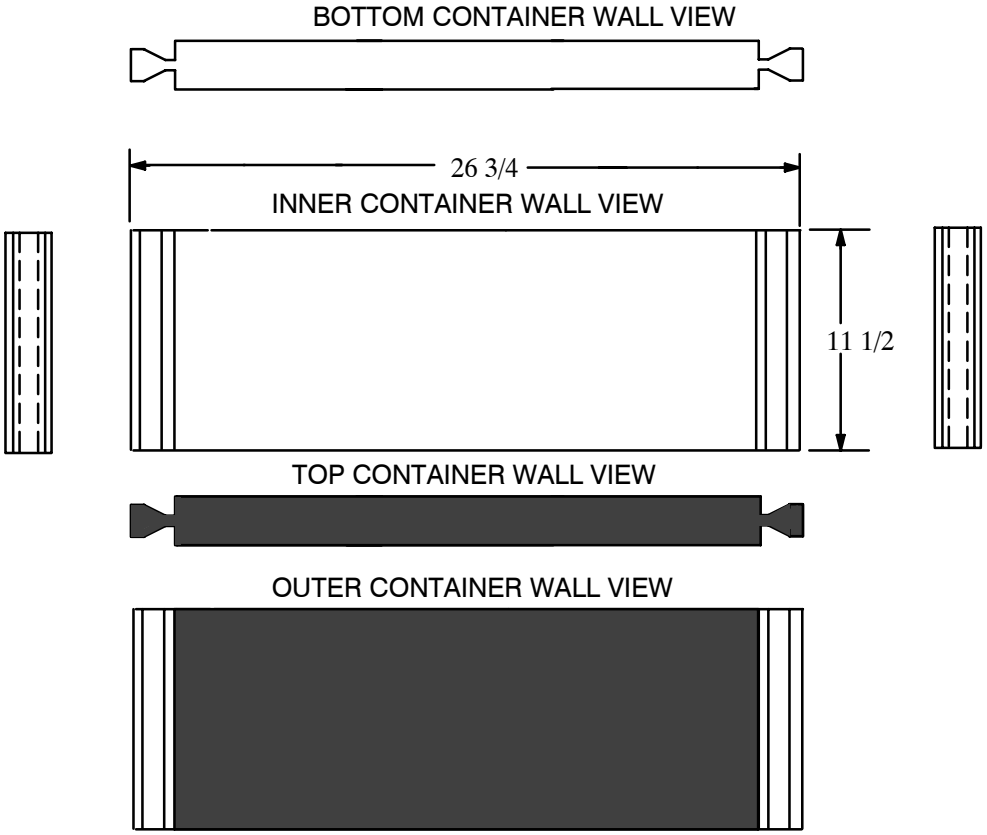
DRAWING NOT TO SCALE
FOR REFERENCE ONLY

NOTES:

THE CONTAINERS TOPS AND BOTTOMS CAN BE COATED BEFORE OR AFTER ASSEMBLY
INSIDE REFERS TO INSIDE SURFACE OF THE CONTAINER AFTER ASEMBLY
OUTSIDE REFERS TO THE OUTER SURFACE OF THE CONTAINER AFTER ASSEMBLY

COOLER SIDE

(2 Required)



FOR REFERENCE ONLY
DRAWING NOT TO SCALE

AREAS SHOWN LIKE THIS ARE NOT COATED

AREAS SHOWN LIKE THIS ARE COATED

NOTES:

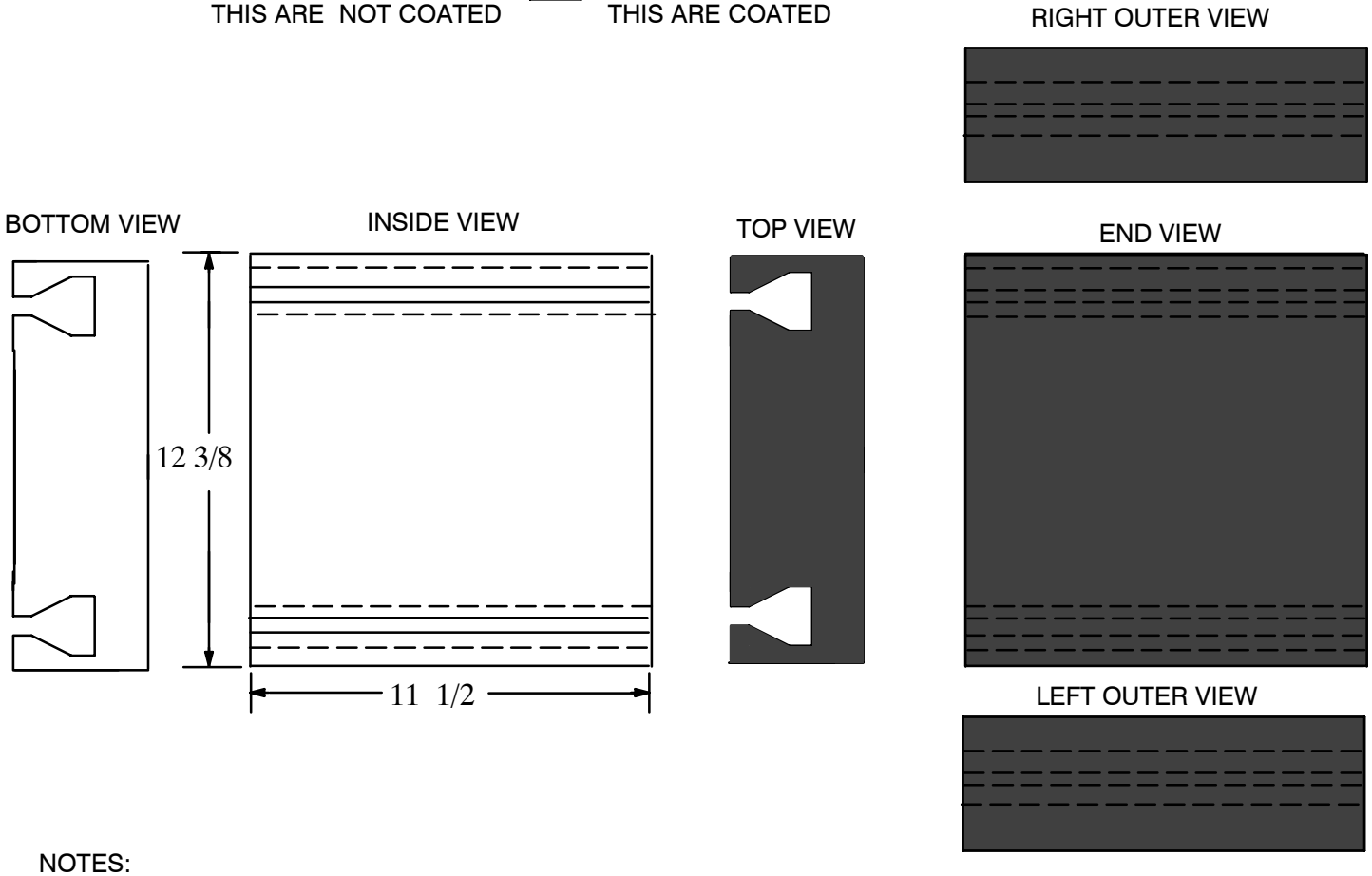
THE CONTAINER SIDES SHALL BE COATED AFTER ASSEMBLY
INSIDE REFERS TO INSIDE SURFACE OF THE CONTAINER AFTER ASEMBLY
OUTSIDE REFERS TO THE OUTER SURFACE OF THE CONTAINER AFTER ASSEMBLY

COATING APPLICATION AREAS OF THE COOLER ENDS

(2 Required)

AREAS SHOWN LIKE THIS ARE NOT COATED

AREAS SHOWN LIKE THIS ARE COATED



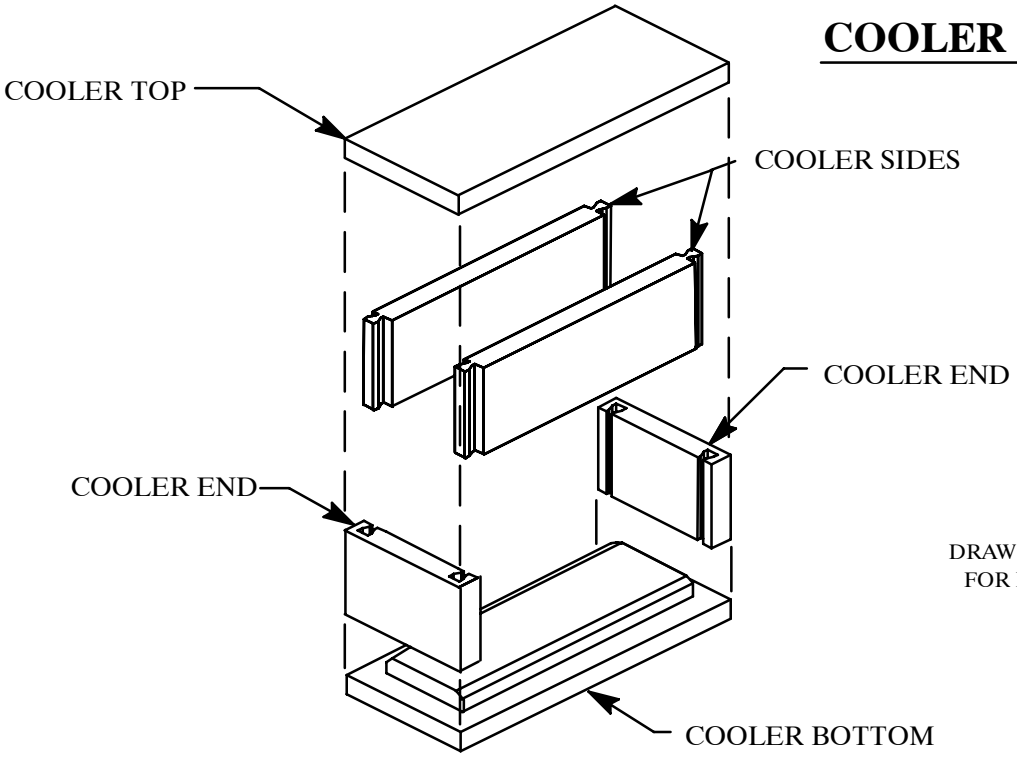
NOTES:

THE CONTAINER ENDS SHALL BE COATED AFTER ASSEMBLY
INSIDE REFERS TO INSIDE SURFACE OF THE CONTAINER AFTER ASEMBLY
OUTSIDE REFERS TO THE OUTER SURFACE OF THE CONTAINER AFTER ASSEMBLY

DRAWING NOT TO SCALE
FOR REFERENCE ONLY

(P) - Assemble the cooler pack as shown in this sketch.

COOLER PACK ASSEMBLY



DRAWING NOT TO SCALE
FOR REFERENCE ONLY

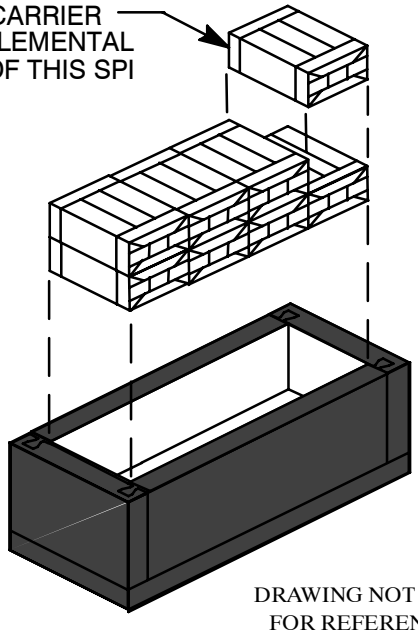
NOTE:
APPLY COMMERCIAL SILICON SEALANT (WHITE OR CLEAR IN COLOR) AT ALL INSIDE SEAMS OF CONTAINER DURING ASSEMBLY. TO INSURE A WATER PROOF SEAL. SEALANT SHALL NOT BE PLACED ON THE LID OF THE CONTAINER TO EFFECT A CLOSURE

PLACEMENT OF THE PACKED SUPPLEMENTAL CONTAINERS IN THE COOLER

ONE BOX ASSEMBLY CARRIER PACKED IN THE SUPPLEMENTAL CONTAINER, STEP 5 OF THIS SPI

Place eight Box Assembly, Carriers packed in their Supplemental container as shown in this sketch. There shall be two layers of 4 Box Assembly Carriers as shown.

Cooler top not shown for clarity.



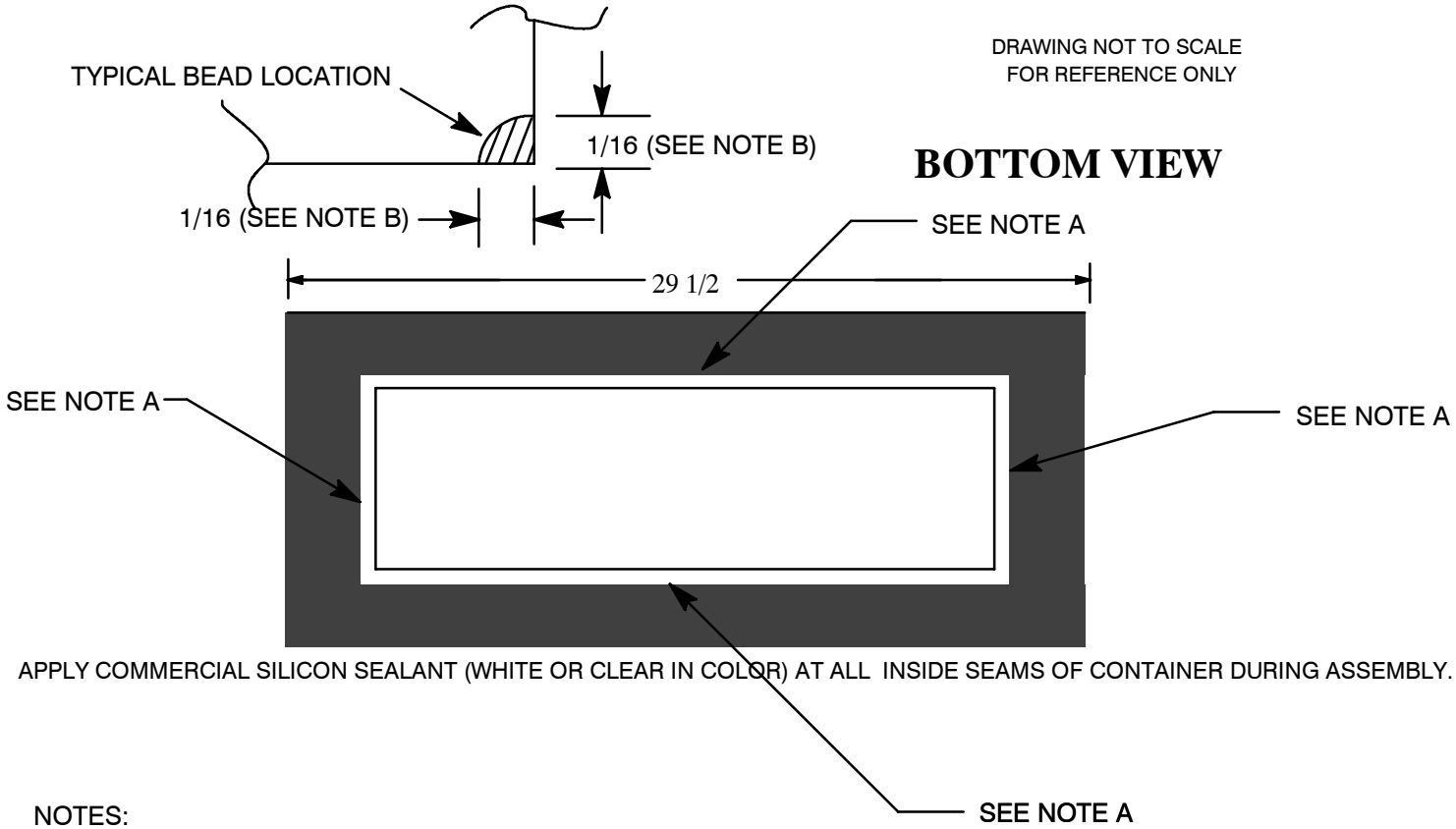
AREAS SHOWN LIKE THIS ARE COATED

AREAS SHOWN LIKE THIS ARE NOT COATED

DRAWING NOT TO SCALE FOR REFERENCE ONLY

(Q) – Exterior Shipping Container. The Cooler box shall serve as the exterior shipping container. Because the carrier assemblies need special environmental protection they shall not be shipped without the all packaging as specified on this SPI. Intermediate packing is not required.

PLACEMENT OF SEALING BEAD IN COOLER PACK LID



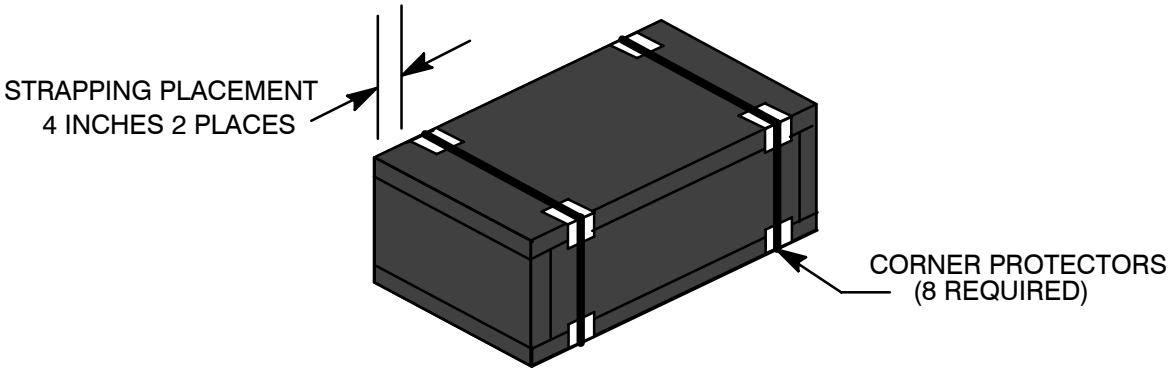
APPLY COMMERCIAL SILICON SEALANT (WHITE OR CLEAR IN COLOR) AT ALL INSIDE SEAMS OF CONTAINER DURING ASSEMBLY.

NOTES:

A. PRIOR TO PLACING THE LID IN PLACE, APPLY A BEAD OF CAULKING AROUND THE SEALING EDGE OF THE OF THE LID AS SHOWN. ALLOW THE BEAD TO CURE. FOLLOW THE CAULKING MANUFACTURES INSTRUCTIONS FOR THE APPLICATION OF THE CAULKING AND THE CURING TIME REQUIRED. THE CAULKING SHALL BE DRY AND SET BEFORE APPLYING THE LID TO THE BOX. THE CAULKING SHALL BE IN A COMMERCIAL SILICON SEALANT (WHITE OR CLEAR IN COLOR).

B. THE BEAD IS USED TO CREATE A SMALL INTERFERENCE FIT TO SEAL THE CONTAINER. MORE OR LESS BEAD MATERIAL IS AUTHORIZED AS LONG AS A SEAL IS ACCOMPLISHED UPON CLOSING.

COOLER BOX CLOSURE



Strapping of the Level A Shipping Container. Flat steel strapping shall be applied to the unit pack container as shown in the sketch above. Two straps are required. The strapping shall be placed as shown in the sketch above. Strapping shall be Type 1, Heavy Duty, Finish B, Grade 2, minimum 5/8 inches in width x 0.023 inches in thickness length as required. The metal seals shall be of the correct size, Heavy duty, Finish B, Grade 2, Style any. Both strapping and seals shall be in accordance with ASTM D 3953. Once tensioned, the steel strappings shall be secured with metal seals of the correct size to effect a strong closure.

DRAWING NOT TO SCALE
FOR REFERENCE ONLY

(R) – In addition to the marking requirements of MIL–STD–129 the following markings shall be applied to each carrier assembly fiberboard containers (step 6) :

a. Manufacture Date
b. Expiration Date
c. Lot Number
d. Shelf Life markings
e. Special Marking:

. **"PROTECT FROM FREEZING."**

In addition to the marking requirements of MIL–STD–129 the following markings shall be applied to the exterior shipping container:

a. Manufacture Date
b. Expiration Date
c. Lot Number
d. Shelf Life markings

e. Special marking

"PROTECT FROM FREEZING

TEMPERATURE SENSITIVE MATERIAL
EXPEDITE SHIPMENT AND MOVEMENT
APPLY TEMPERATURE CONTROL AT FINAL DESTINATION"

The additional special marking as shown in (Q) e. above, shall be marked in red print at least 48 point and placed on the marking side of the exterior shipping container. If there is not enough room on the marking side of the container. The label shall then placed on the top of the exterior shipping container.

(S) –PACKAGING QUALITY PERFORMANCE AND TESTING REQUIREMENTS

1. Classification of inspections. The inspection requirements for the packaged item described herein are classified as follows:
   (a) First article inspection
   (b) Conformance inspection
2. First Article inspection. The first article inspection and approval consists of the Contractor inspection of items prior to regular production.
   (a) Sampling. The first article packaging sample shall consist of not less than three unit pack containers and their contents, and when heat seal seam testing is required, three empty barrier bags. Packaged samples shall be taken from the quantity of first article sample items specified in QAP5–15–31917. Packaged samples shall be produced using the same methods, materials and equipment as will be used during regular production.
   (b) Examination. The packaged sample shall be examined in accordance with the visual preservation examinations (Table G–1) and the packing inspection examination procedures in Appendix G of MIL–STD–2073–1.
   (c) Leakage and heat seal seam tests. Sealed containers (in accordance with Method 41) shall be leak tested as specified in Appendix G of MIL–STD–2073–1. Sample barrier bags shall be destructively tested in accordance with the applicable heat seal seam test requirements in Appendix G of MIL–STD–2073–1. Testing of the barrier bag for Heat Seal Seam strength and leakage is required.
   (d) Acceptance criteria. First article samples that fail to comply with any of the applicable requirements shall be rejected.
3. Conformance Inspection.
   (a) Sampling. Sampling size shall be in accordance with the Attributes Sampling Plan Table of MIL–STD–1916. For examinations and leakage tests, Verification Level I shall be used. When heat seal seam tests are required, Verification Level II shall be used. Existing sampling plans in item specifications or quality assurance provisions shall take precedence.
4. Classification of characteristics. Quality conformance examinations and tests shall be as specified in Appendix G of MIL–STD–2073–1.

NOT APPLICABLE TO INTERPLANT SHIPMENT (A)

SPECIAL PACKAGING INSTRUCTION(SPI)

NATIONAL STOCK NUMBER
6665–01–525–7008

NOMENCLATURE	UI	QUP	SPI NUMBER (PN)
Box Assembly, Carrier	BX (C)	8 (C)	P5–15–31917–30

Cleaning & Drying shall be in accordance with MIL–STD–2073–1

MILTARY PRESERVATION REQUIREMENT **(B)** (MIL–STD–2073–1, Method41)	STEPS	DRAWING OR SPECIFICATION	STYLE	TYPE	GRADE	CLASS	SIZE AND REMARKS (INCHES)
Cushioning	(D) 1	A–A–59135			A	1	12 x 20 x 1/8 thick
Container	(E) 2	MIL–DTL–117	1	I		E	12 x 14
Dessicant	(F) 3	MIL–D–3464		II			One (1) Unit
Closure	(G) 4						Heat Seal
Supplemental Container	(H) 5	ASTM D 5118	RSC		W5c	WR	8 x 6 x 4 ID
Supplemental Closure	(I) 6	ASTM D 1974					Sealing Method B
Cooler Top	(J) (N) 7						
Cooler Bottom	(K) (N) 8						
Cooler End	(L) (N) 9						
Cooler Side	(M)(N)10						
Cooler Assembly	(0)(P)11						
Cooler Loading	12						See Sketch, Page 11
Cooler Pack Closure	13						See Sketch, Page 13

INTERMEDIATE MILITARY PRESERVATION AND PACKING
☐ In accordance with MIL–STD–2073–1
☒ As specified hereon. **See note (Q)**

MARKING
☒ In accordance with MIL–STD–129 **AND NOTE(R)**
☐ As specified hereon.

QUALITY PERFORMANCE AND TESTING REQUIREMENTS
☒ In accordance with MIL–STD–2073–1 **AND NOTE (S)**
☐ As specified hereon.

Unless otherwise specified, materials shall be minimum size in accordance with MIL–STD–2073–1. Tolerances shall be in accordance with material specifications.

UNIT PACK LOGISTICS DATA (Approximate unit packi weight and size)

Level	WEIGHT (POUNDS)	CUBE (CUBIC FEET)	SIZE (EXTERIOR FEET)
A	9.80 lbs.	2.903 cu. ft.	2.47 x 1.04 x 1.13

REMARKS/ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.

(A) – THIS SPI IS NOT APPLICABLE FOR INTERPLANT SHIPMENTS. Packaging and marking for interplant shipment is for supplies and materials that do not directly enter the military supply system. Typical interplant shipments are shipments from a vendor to a subcontractor or a prime contractor, or between contractors and subcontractors, or from a vendor or contractor to a military arsenal, plant, or other activity for evaluation, immediate use, or further processing as specified in the applicable contract.

(B) – The components, that make up the Box Assembly, Carrier shall be as specified on drawing 5–15–31917–30

ITEM DATA (APPROX)
ITEM CODE – 244, 245, 246, 247, 283
ITEM SIZE – 6 3/8 x 4 1/2 x 3 1/8
ITEM WEIGHT – .30 lbs

*Original Preparer*Dean Hansen
ECBC 81361
AMSRD–ECB–ENA–P

Revised by:

PAGE NUMBER	NUMBER OF PAGES
1	14

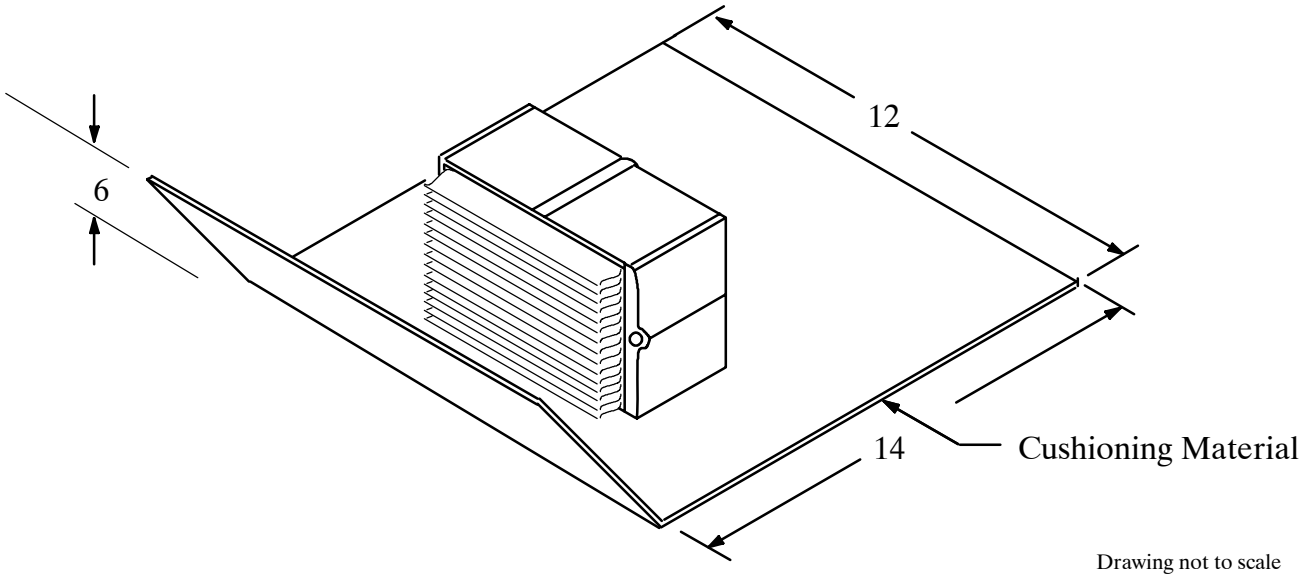
APPROVAL	REVISION	DATE
DVH 245–0017–011	–	30 Nov 07

DISTRIBUTION STATEMENT A: Approved for public release, distribution unlimited.

(C) – The unit of issue is box. The unit of measure for this pack is 8 Box Assembly, Carriers per unit pack container.

(D) – Start the wrap by covering the open face of the Box Assembly, Carriers with one 12 inch wide end of the cushioning material parallel to the top or bottom of the open face, and wrap to obtain a maximum number of cushioning layers across the open face. (See sketch on page 2) Secure wrap with tape conforming to ASTM D5486, Type I, class 1 or 2. Ensure that corners of wrapped item are securely taped. Tape shall not contact item.

PLACEMENT OF BAGGED BOX ASSEMBLY CARRIER IN CUSHIONING



Drawing not to scale
For Reference only

(E) – Place the cushioned and taped Box Assembly, Carriers in bag.

(F) – Desiccant shall be placed in the barrier bag step 2 of this SPI. The desiccant shall be 1 unit bag and conform to MIL–D–3464 type I or II. In addition place one humidity indicator card that covers a range of 10, 20, 30, 40, 50 and 60% and conforms to MIL–I–8835 into the bag. As an alternative a commercially available humidity indicator that covers a range of 10, 20, 30, 40, 50 and 60% may be substituted.

(G) – Closure of the barrier bag shall be accomplished by heat sealing. Heat sealing shall be accomplished in accordance with the barrier bag manufactures instructions. Excess air shall be removed from the barrier bag prior to heat sealing.

(H) – Place the bagged and cushioned Box Assembly Carrier into the supplemental container step 5 of this SPI. Staples shall not be used for the assembly of the supplemental container.

(I) – The closure of the supplemental container shall be in accordance with step 6 of this SPI. Staples shall not be used for the closure.

(J) – Fabricate the cooler top as shown on page 4 of this SPI. See step 7.

(K) – Fabricate the cooler bottom as shown on page 4 of this SPI. See step 8.

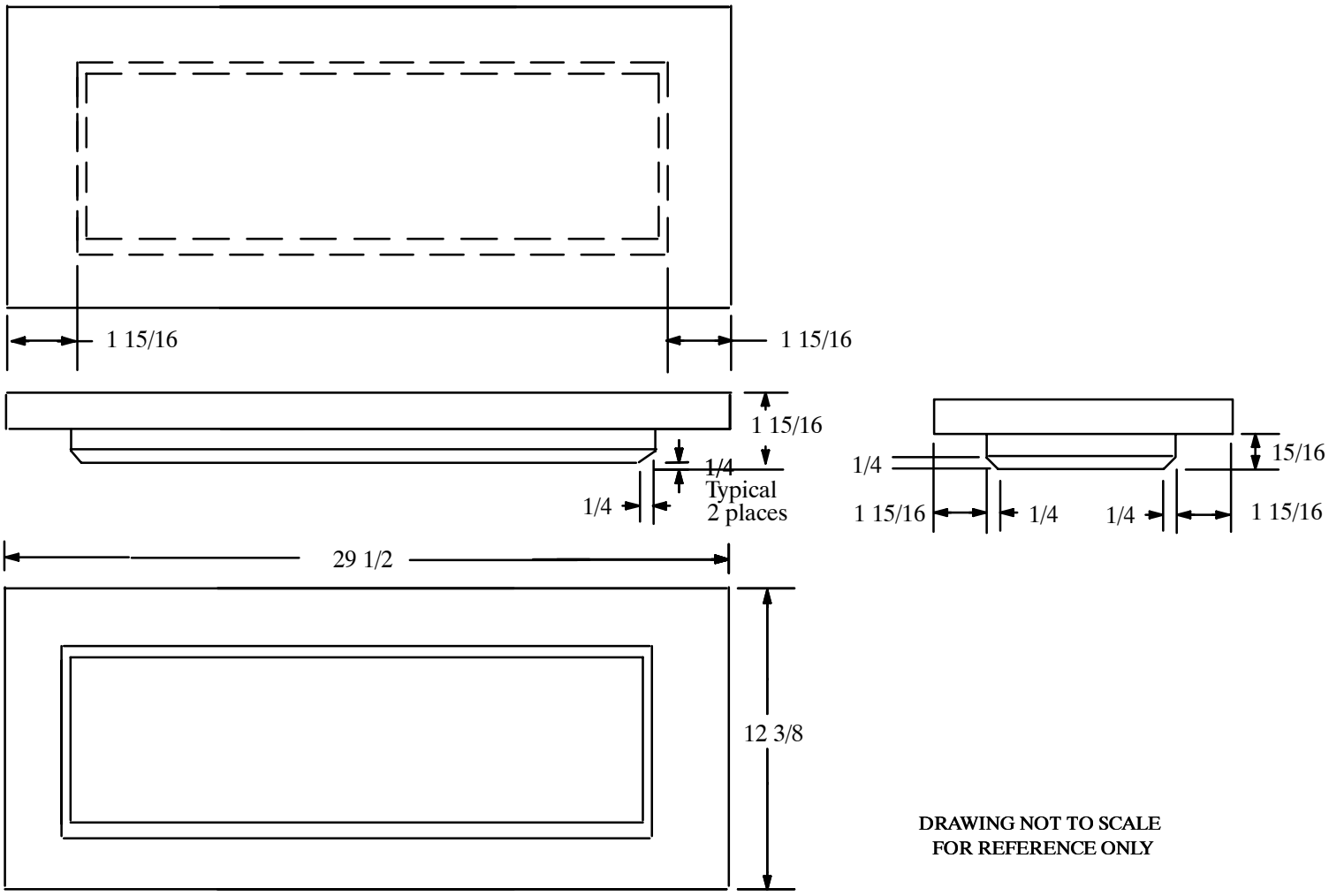
(L) – Fabricate the cooler end as shown on page 5 of this SPI. See step 9.

(M) – Fabricate the cooler Sides as shown on page 5 of this SPI. See step 10.

(N) – Polystyrene material used in the Intermediate pack. Material used for the intermediate cooler pack shall be 1.8 to 2.2 lbs density per cubic foot Polystyrene . The cooler pack shall be assembled in accordance with the sketch on page 6 of this SPI. The R or thermal value of the material used for the cooler pack shall be not less than 4.3 R–Value per 1 inch thickness of material. The standard tolerance for material shall be (+–) .09 inches. Suggested source of supply for the Polystyrene components of this pack is: FPM Expandable Polystyrene, 2053 Commerce Street, Lancaster, Ohio 43130, Phone number (740) 687–5934.

COOLER TOP AND BOTTOM

(2 Required)

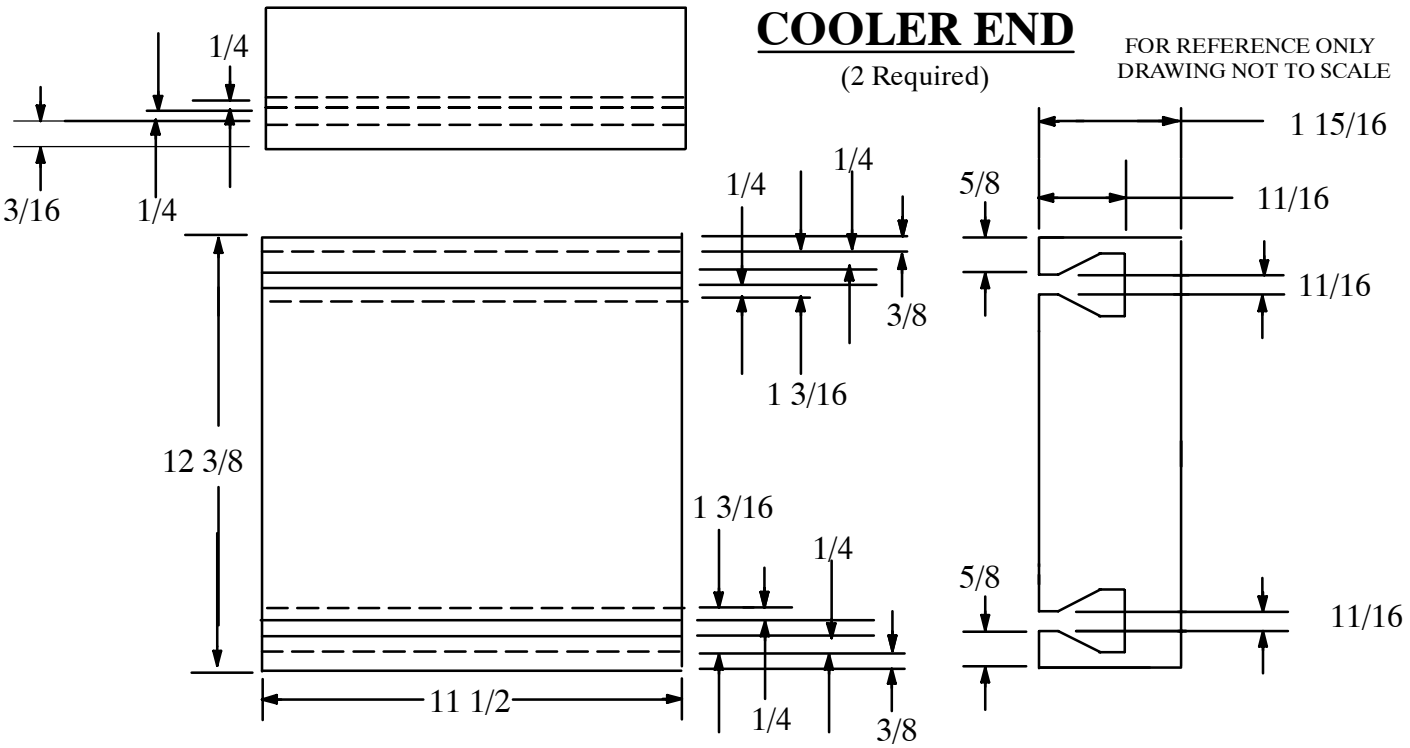


DRAWING NOT TO SCALE
FOR REFERENCE ONLY

COOLER END

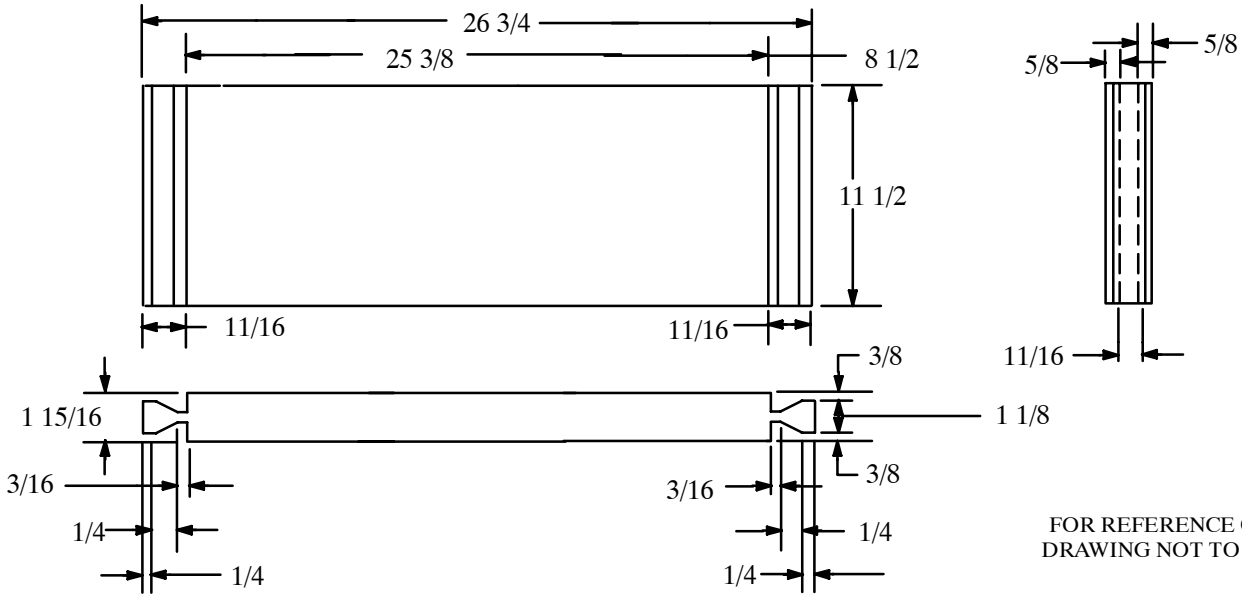
(2 Required)

FOR REFERENCE ONLY
DRAWING NOT TO SCALE



COOLER SIDE

(2 Required)



FOR REFERENCE ONLY
DRAWING NOT TO SCALE

(O) – Coating of the cooler pack assembly. The cooler pack shall have its exterior surfaces coated as shown on pages 6 through 9 of this SPI. The coating shall be a minimum of 30 to 40 thousands of an inch thickness. The coating shall be as follows:
A polyurea coating either Olive Drab Green or Sand in Color. The cured stress/Tensile shall be between 2800 to 3000 psi. The cured Elongation @25 degrees C shall be between 350 and 375%. The cured Hardness shall be 90 Shore A. The cured Tear Strength Ply shall be a minimum of 400 PLI, When cured the thermal shock shall e a minimum of –65 degrees F with no effect.. When cured the impact notched shall be a minimum of 65 in–lbs./in. A suggest product that has demonstrated these requirements is InstaCote M–25. The Manufactures information is as follows:
InstaCoat, 160 C. Lavoy Rd., Erie, Michigan, USA 48133, Phone (734) 847–5260.

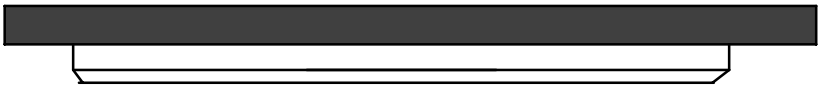
COATING APPLICATION AREAS TOP AND BOTTOM

OUTSIDE TOP VIEW

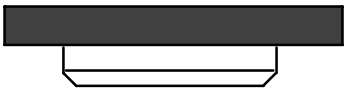
AREAS SHOWN LIKE THIS ARE COATED

AREAS SHOWN LIKE THIS ARE NOT COATED

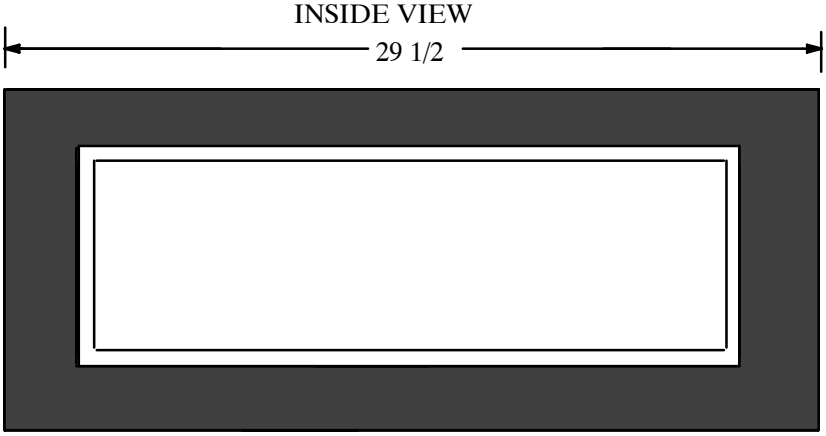
SIDE VIEW



END VIEW



INSIDE VIEW



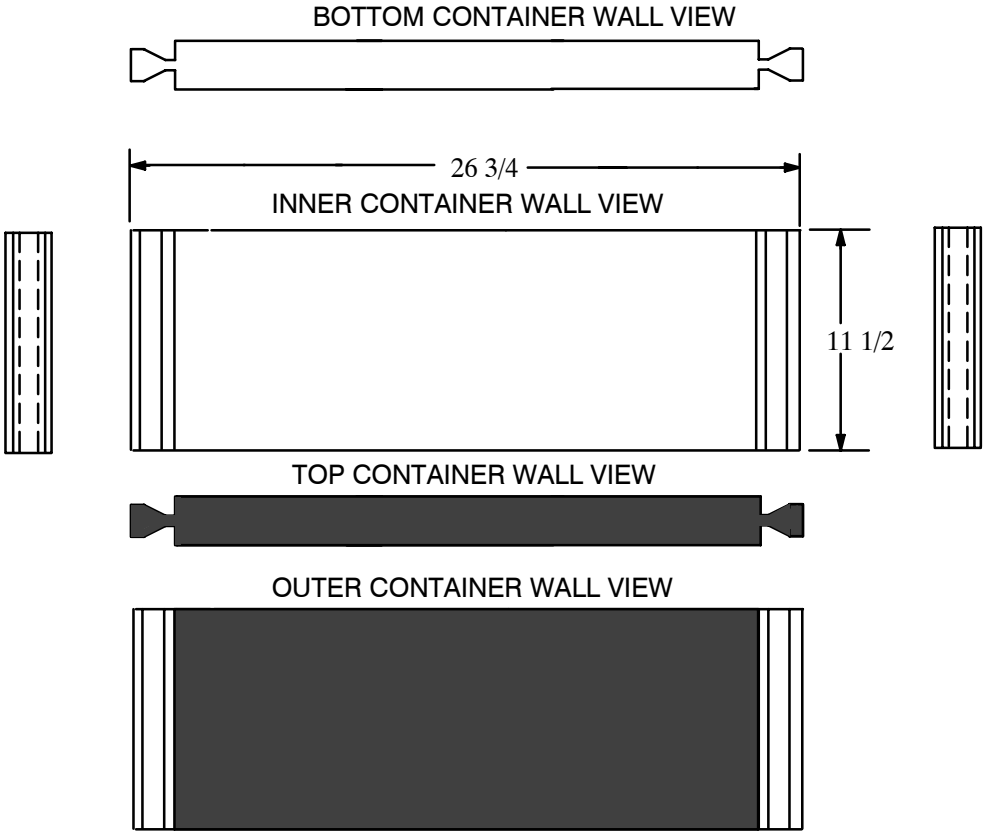
DRAWING NOT TO SCALE
FOR REFERENCE ONLY

NOTES:

THE CONTAINERS TOPS AND BOTTOMS CAN BE COATED BEFORE OR AFTER ASSEMBLY
INSIDE REFERS TO INSIDE SURFACE OF THE CONTAINER AFTER ASEMBLY
OUTSIDE REFERS TO THE OUTER SURFACE OF THE CONTAINER AFTER ASSEMBLY

COOLER SIDE

(2 Required)



FOR REFERENCE ONLY
DRAWING NOT TO SCALE

AREAS SHOWN LIKE THIS ARE NOT COATED

AREAS SHOWN LIKE THIS ARE COATED

NOTES:

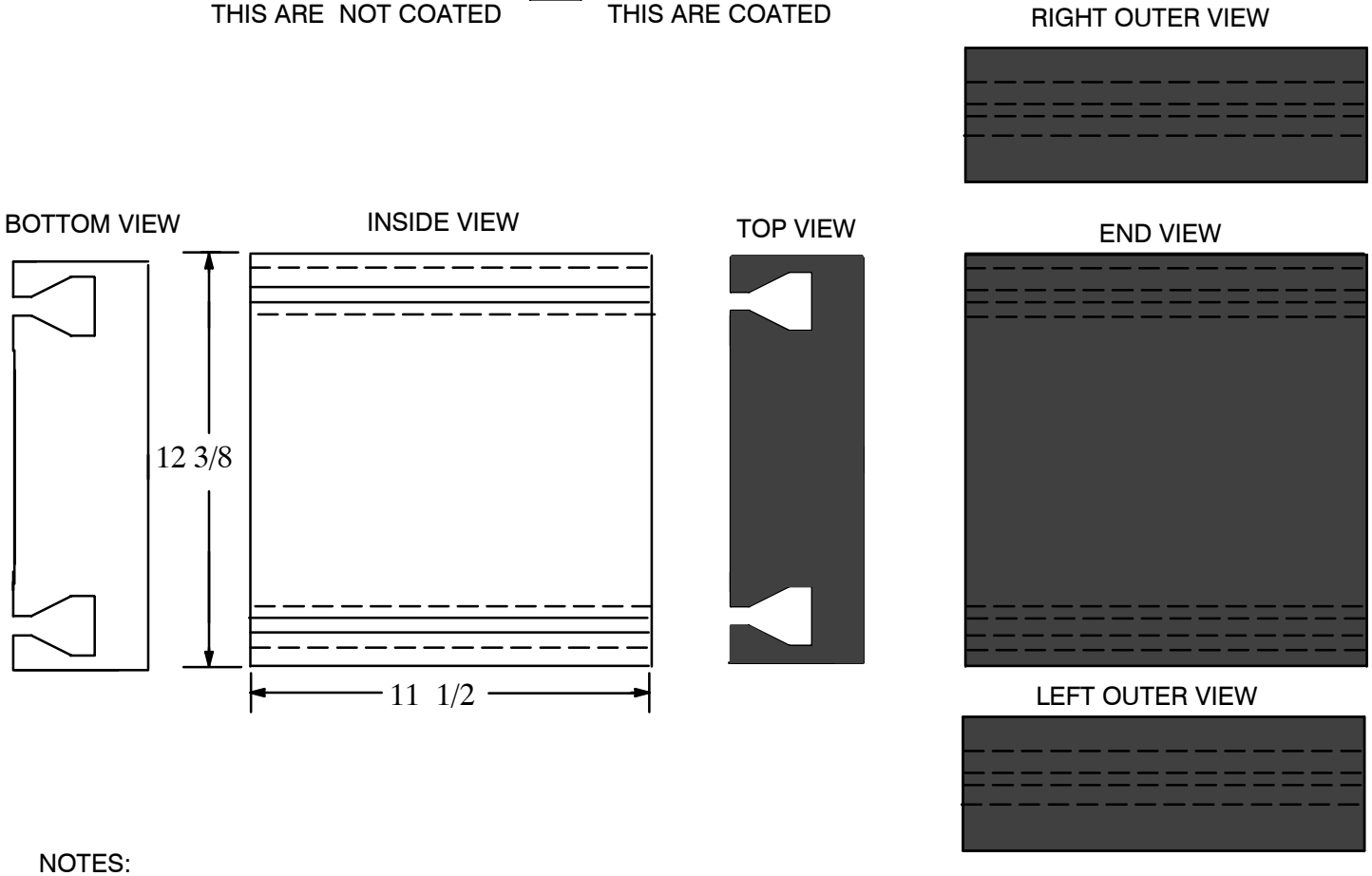
THE CONTAINER SIDES SHALL BE COATED AFTER ASSEMBLY
INSIDE REFERS TO INSIDE SURFACE OF THE CONTAINER AFTER ASEMBLY
OUTSIDE REFERS TO THE OUTER SURFACE OF THE CONTAINER AFTER ASSEMBLY

COATING APPLICATION AREAS OF THE COOLER ENDS

(2 Required)

AREAS SHOWN LIKE THIS ARE NOT COATED

AREAS SHOWN LIKE THIS ARE COATED



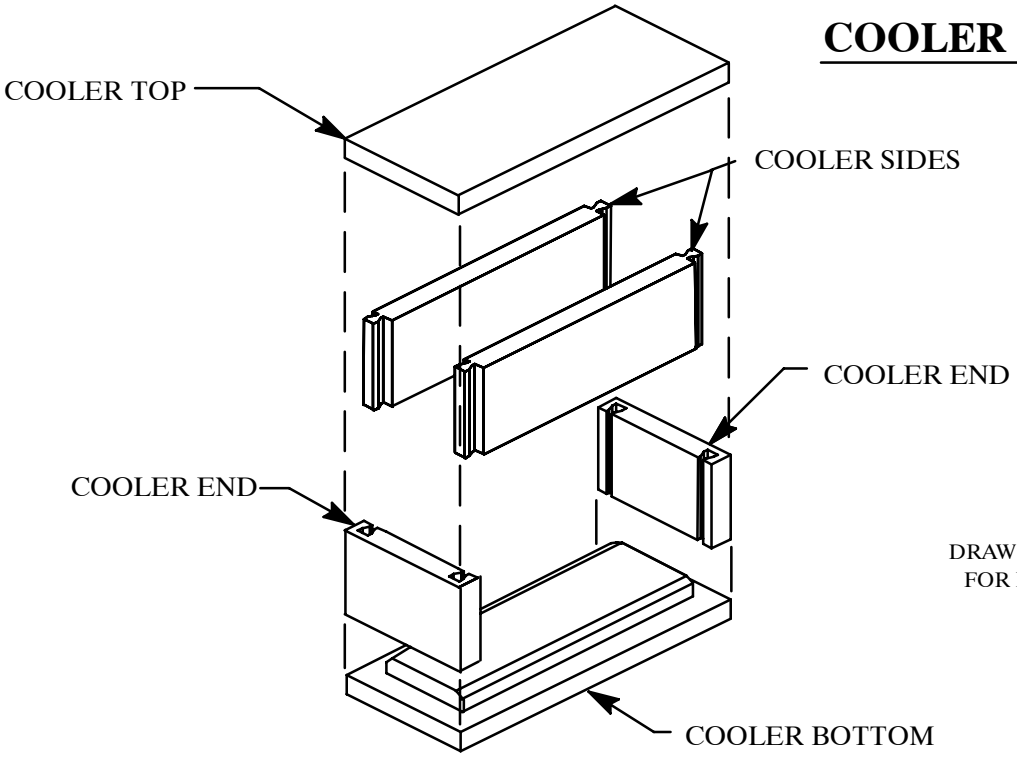
NOTES:

THE CONTAINER ENDS SHALL BE COATED AFTER ASSEMBLY
INSIDE REFERS TO INSIDE SURFACE OF THE CONTAINER AFTER ASEMBLY
OUTSIDE REFERS TO THE OUTER SURFACE OF THE CONTAINER AFTER ASSEMBLY

DRAWING NOT TO SCALE
FOR REFERENCE ONLY

(P) - Assemble the cooler pack as shown in this sketch.

COOLER PACK ASSEMBLY



DRAWING NOT TO SCALE
FOR REFERENCE ONLY

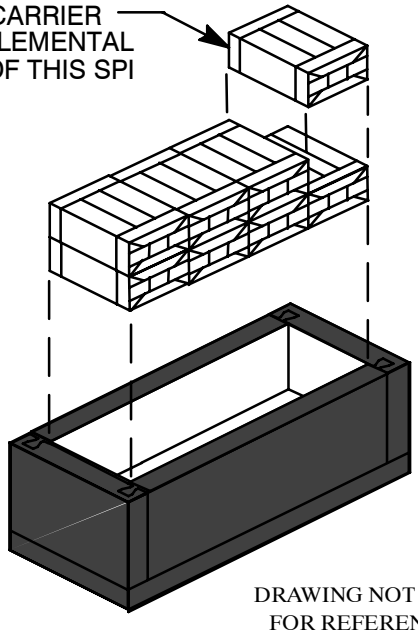
NOTE:
APPLY COMMERCIAL SILICON SEALANT (WHITE OR CLEAR IN COLOR) AT ALL INSIDE SEAMS OF CONTAINER DURING ASSEMBLY. TO INSURE A WATER PROOF SEAL. SEALANT SHALL NOT BE PLACED ON THE LID OF THE CONTAINER TO EFFECT A CLOSURE

PLACEMENT OF THE PACKED SUPPLEMENTAL CONTAINERS IN THE COOLER

ONE BOX ASSEMBLY CARRIER PACKED IN THE SUPPLEMENTAL CONTAINER, STEP 5 OF THIS SPI

Place eight Box Assembly, Carriers packed in their Supplemental container as shown in this sketch. There shall be two layers of 4 Box Assembly Carriers as shown.

Cooler top not shown for clarity.



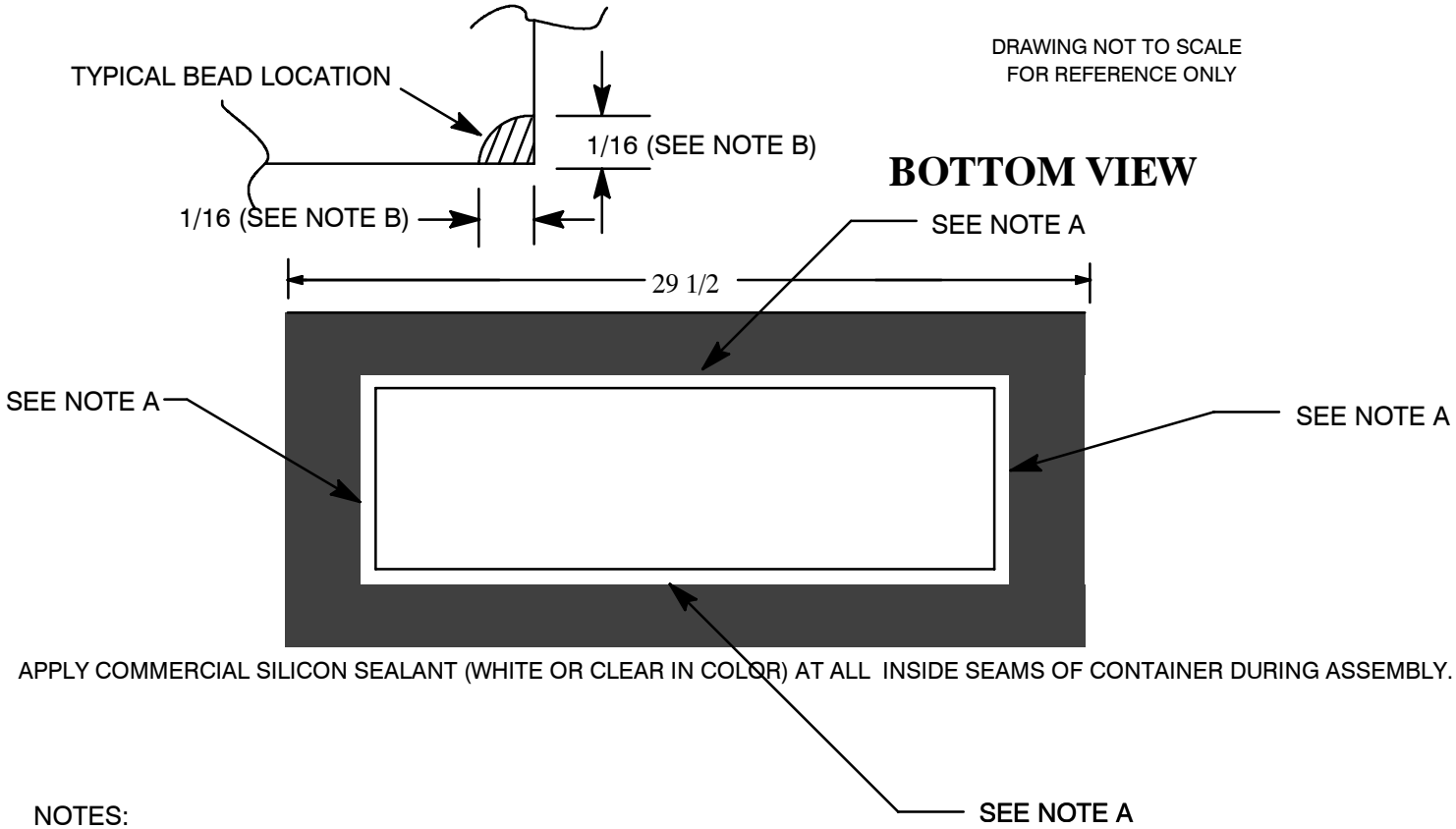
AREAS SHOWN LIKE THIS ARE COATED

AREAS SHOWN LIKE THIS ARE NOT COATED

DRAWING NOT TO SCALE FOR REFERENCE ONLY

(Q) – Exterior Shipping Container. The Cooler box shall serve as the exterior shipping container. Because the carrier assemblies need special environmental protection they shall not be shipped without the all packaging as specified on this SPI. Intermediate packing is not required.

PLACEMENT OF SEALING BEAD IN COOLER PACK LID



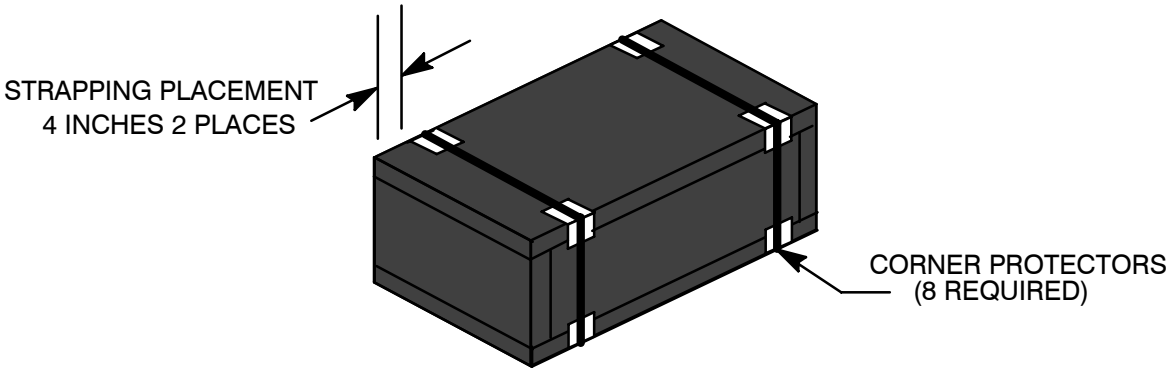
APPLY COMMERCIAL SILICON SEALANT (WHITE OR CLEAR IN COLOR) AT ALL INSIDE SEAMS OF CONTAINER DURING ASSEMBLY.

NOTES:

A. PRIOR TO PLACING THE LID IN PLACE, APPLY A BEAD OF CAULKING AROUND THE SEALING EDGE OF THE OF THE LID AS SHOWN. ALLOW THE BEAD TO CURE. FOLLOW THE CAULKING MANUFACTURES INSTRUCTIONS FOR THE APPLICATION OF THE CAULKING AND THE CURING TIME REQUIRED. THE CAULKING SHALL BE DRY AND SET BEFORE APPLYING THE LID TO THE BOX. THE CAULKING SHALL BE IN A COMMERCIAL SILICON SEALANT (WHITE OR CLEAR IN COLOR).

B. THE BEAD IS USED TO CREATE A SMALL INTERFERENCE FIT TO SEAL THE CONTAINER. MORE OR LESS BEAD MATERIAL IS AUTHORIZED AS LONG AS A SEAL IS ACCOMPLISHED UPON CLOSING.

COOLER BOX CLOSURE



Strapping of the Level A Shipping Container. Flat steel strapping shall be applied to the unit pack container as shown in the sketch above. Two straps are required. The strapping shall be placed as shown in the sketch above. Strapping shall be Type 1, Heavy Duty, Finish B, Grade 2, minimum 5/8 inches in width x 0.023 inches in thickness length as required. The metal seals shall be of the correct size, Heavy duty, Finish B, Grade 2, Style any. Both strapping and seals shall be in accordance with ASTM D 3953. Once tensioned, the steel strappings shall be secured with metal seals of the correct size to effect a strong closure.

DRAWING NOT TO SCALE
FOR REFERENCE ONLY

(R) – In addition to the marking requirements of MIL–STD–129 the following markings shall be applied to each carrier assembly fiberboard containers (step 6) :

a. Manufacture Date
b. Expiration Date
c. Lot Number
d. Shelf Life markings
e. Special Marking:

. **"PROTECT FROM FREEZING."**

In addition to the marking requirements of MIL–STD–129 the following markings shall be applied to the exterior shipping container:

a. Manufacture Date
b. Expiration Date
c. Lot Number
d. Shelf Life Markings

e. Special marking

"PROTECT FROM FREEZING

TEMPERATURE SENSITIVE MATERIAL
EXPEDITE SHIPMENT AND MOVEMENT
APPLY TEMPERATURE CONTROL AT FINAL DESTINATION"

The additional special marking as shown in (Q) e. above, shall be marked in red print at least 48 point and placed on the marking side of the exterior shipping container. If there is not enough room on the marking side of the container. The label shall then placed on the top of the exterior shipping container.

(S) –PACKAGING QUALITY PERFORMANCE AND TESTING REQUIREMENTS

1. Classification of inspections. The inspection requirements for the packaged item described herein are classified as follows:
   (a) First article inspection
   (b) Conformance inspection
2. First Article inspection. The first article inspection and approval consists of the Contractor inspection of items prior to regular production.
   (a) Sampling. The first article packaging sample shall consist of not less than three unit pack containers and their contents, and when heat seal seam testing is required, three empty barrier bags. Packaged samples shall be taken from the quantity of first article sample items specified in QAP5–15–31917. Packaged samples shall be produced using the same methods, materials and equipment as will be used during regular production.
   (b) Examination. The packaged sample shall be examined in accordance with the visual preservation examinations (Table G–1) and the packing inspection examination procedures in Appendix G of MIL–STD–2073–1.
   (c) Leakage and heat seal seam tests. Sealed containers (in accordance with Method 41) shall be leak tested as specified in Appendix G of MIL–STD–2073–1. Sample barrier bags shall be destructively tested in accordance with the applicable heat seal seam test requirements in Appendix G of MIL–STD–2073–1. Testing of the barrier bag for Heat Seal Seam strength and leakage is required.
   (d) Acceptance criteria. First article samples that fail to comply with any of the applicable requirements shall be rejected.
3. Conformance Inspection.
   (a) Sampling. Sampling size shall be in accordance with the Attributes Sampling Plan Table of MIL–STD–1916. For examinations and leakage tests, Verification Level I shall be used. When heat seal seam tests are required, Verification Level II shall be used. Existing sampling plans in item specifications or quality assurance provisions shall take precedence.
4. Classification of characteristics. Quality conformance examinations and tests shall be as specified in Appendix G of MIL–STD–2073–1.

NOT APPLICABLE TO INTERPLANT SHIPMENT (A)

SPECIAL PACKAGING INSTRUCTION(SPI)

NATIONAL STOCK NUMBER
6665–01–527–1120

NOMENCLATURE	UI	QUP	SPI NUMBER (PN)
Box Assembly, Carrier	BX (C)	1 (C)	P5–15–31917–20

Cleaning & Drying shall be in accordance with MIL–STD–2073–1

MILTARY PRESERVATION REQUIREMENT **(B)** (MIL–STD–2073–1, Method41)	STEPS	DRAWING OR SPECIFICATION	STYLE	TYPE	GRADE	CLASS	SIZE AND REMARKS (INCHES)
Cushioning	(D) 1	A–A–59135			A	1	12 x 20 x 1/8 thick
Container	(E) 2	MIL–DTL–117	1	I		E	12 x 14
Dessicant	(F) 3	MIL–D–3464		II			One (1) Unit
Closure	(G) 4						Heat Seal
Supplemental Container	(H) 5	ASTM D 5118	RSC		W5c	WR	8 x 6 x 4 ID
Supplemental Closure	(I) 6	ASTM D 1974					Sealing Method B
Cooler Top	(J) (N) 7						
Cooler Bottom	(K) (N) 8						
Cooler End	(L) (N) 9						
Cooler Side	(M)(N)10						
Cooler Assembly	(0)(P)11						
Cooler Loading	12						See Sketch, Page 11
Cooler Pack Closure	13						See Sketch, Page 13

INTERMEDIATE MILITARY PRESERVATION AND PACKING
☐ In accordance with MIL–STD–2073–1
☒ As specified hereon. **See note (Q)**

MARKING
☒ In accordance with MIL–STD–129 **AND NOTE(R)**
☐ As specified hereon.

QUALITY PERFORMANCE AND TESTING REQUIREMENTS
☒ In accordance with MIL–STD–2073–1 **AND NOTE (S)**
☐ As specified hereon.

Unless otherwise specified, materials shall be minimum size in accordance with MIL–STD–2073–1. Tolerances shall be in accordance with material specifications.

UNIT PACK LOGISTICS DATA (Approximate unit packi weight and size)

Level	WEIGHT (POUNDS)	CUBE (CUBIC FEET)	SIZE (EXTERIOR FEET)
A	4.10 lbs.	0.668 cu. ft.	1.04 x .88 x .73

REMARKS/ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.

(A) – THIS SPI IS NOT APPLICABLE FOR INTERPLANT SHIPMENTS. Packaging and marking for interplant shipment is for supplies and materials that do not directly enter the military supply system. Typical interplant shipments are shipments from a vendor to a subcontractor or a prime contractor, or between contractors and subcontractors, or from a vendor or contractor to a military arsenal, plant, or other activity for evaluation, immediate use, or further processing as specified in the applicable contract.

(B) – The components, that make up the Box Assembly, Carrier shall be as specified on drawing 5–15–31917–20

ITEM DATA (APPROX)
ITEM CODE – 244, 245, 246, 247, 288
ITEM SIZE – 6 3/8 x 4 1/2 x 3 1/8
ITEM WEIGHT – .30 lbs

*Original Preparer*Dean Hansen
ECBC 81361
AMSRD–ECB–ENA–P

Revised by:

PAGE NUMBER	NUMBER OF PAGES
1	14

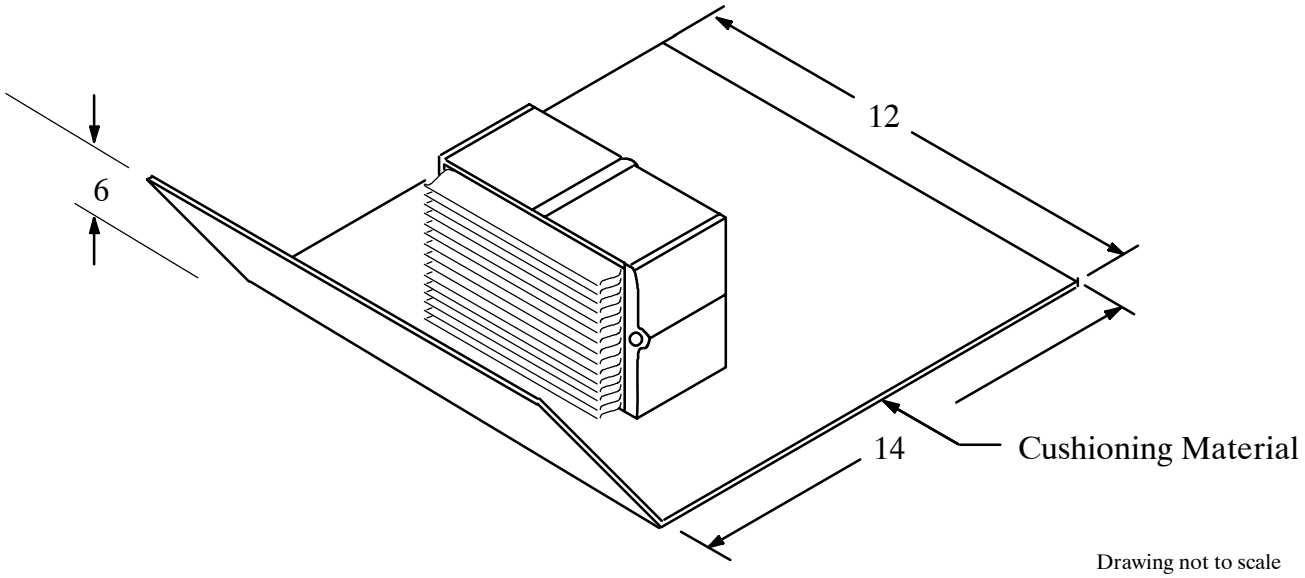
APPROVAL	REVISION	DATE
DVH 245–0017–010	–	30 Nov 07

DISTRIBUTION STATEMENT A: Approved for public release, distribution unlimited.

(C) – The unit of issue is box. The unit of measure for this pack is 1 Box Assembly, Carriers per unit pack container.

(D) – Start the wrap by covering the open face of the Box Assembly, Carriers with one 12 inch wide end of the cushioning material parallel to the top or bottom of the open face, and wrap to obtain a maximum number of cushioning layers across the open face. (See sketch on page 2) Secure wrap with tape conforming to ASTM D5486, Type I, class 1 or 2. Ensure that corners of wrapped item are securely taped. Tape shall not contact item.

PLACEMENT OF BAGGED BOX ASSEMBLY CARRIER IN CUSHIONING



Drawing not to scale
For Reference only

(E) – Place the cushioned and taped Box Assembly, Carriers in bag.

(F) – Desiccant shall be placed in the barrier bag step 2 of this SPI. The desiccant shall be 1 unit bag and conform to MIL–D–3464 type I or II. In addition place one humidity indicator card that covers a range of 10, 20, 30, 40, 50 and 60% and conforms to MIL–I–8835 into the bag. As an alternative a commercially available humidity indicator that covers a range of 10, 20, 30, 40, 50 and 60% may be substituted.

(G) – Closure of the barrier bag shall be accomplished by heat sealing. Heat sealing shall be accomplished in accordance with the barrier bag manufactures instructions. Excess air shall be removed from the barrier bag prior to heat sealing.

(H) – Place the bagged and cushioned Box Assembly Carrier into the supplemental container step 5 of this SPI. Staples shall not be used for the assembly of the supplemental container.

(I) – The closure of the supplemental container shall be in accordance with step 6 of this SPI. Staples shall not be used for the closure.

(J) – Fabricate the cooler top as shown on page 4 of this SPI. See step 7.

(K) – Fabricate the cooler bottom as shown on page 4 of this SPI. See step 8.

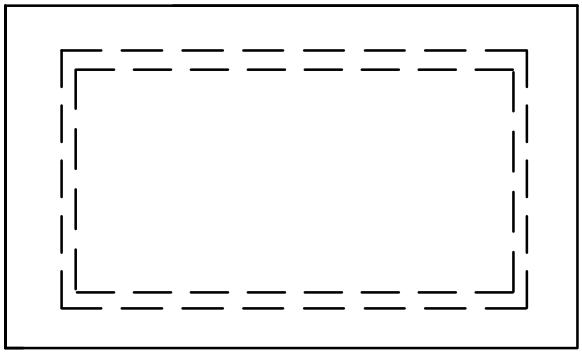
(L) – Fabricate the cooler end as shown on page 5 of this SPI. See step 9.

(M) – Fabricate the cooler Sides as shown on page 5 of this SPI. See step 10.

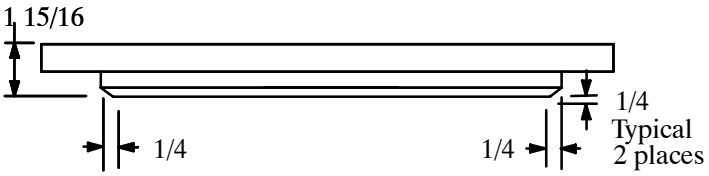
(N) – Polystyrene material used in the Intermediate pack. Material used for the intermediate cooler pack shall be 1.8 to 2.2 lbs density per cubic foot Polystyrene . The cooler pack shall be assembled in accordance with the sketch on page 6 of this SPI. The R or thermal value of the material used for the cooler pack shall be not less than 4.3 R–Value per 1 inch thickness of material. The standard tolerance for material shall be (+–) .09 inches. Suggested source of supply for the Polystyrene components of this pack is: FPM Expandable Polystyrene, 2053 Commerce Street, Lancaster, Ohio 43130, Phone number (740) 687–5934.

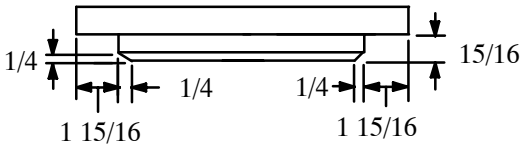
COOLER TOP AND BOTTOM

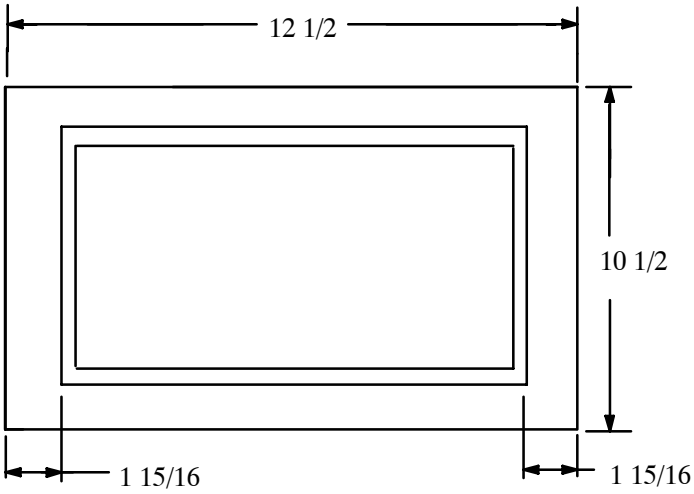
(2 Required)



DRAWING NOT TO SCALE
FOR REFERENCE ONLY



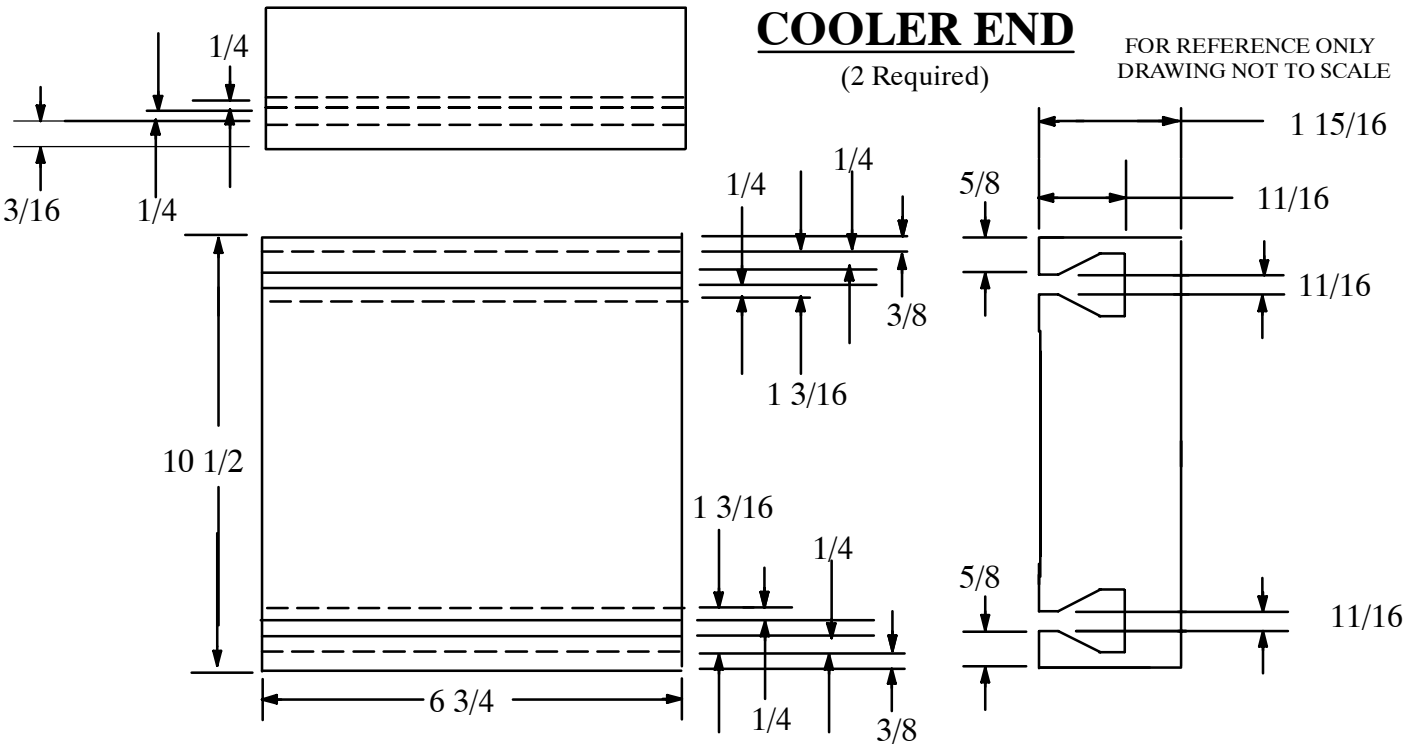




COOLER END

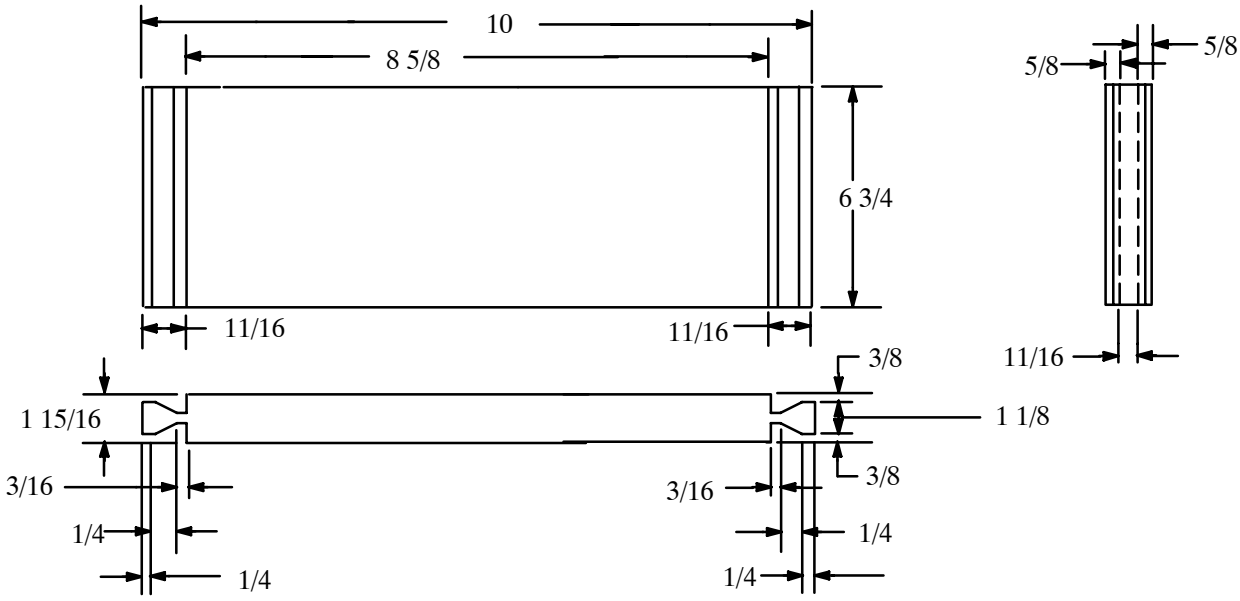
(2 Required)

FOR REFERENCE ONLY
DRAWING NOT TO SCALE



COOLER SIDE

(2 Required)



(O) – Coating of the cooler pack assembly. The cooler pack shall have its exterior surfaces coated as shown on pages 6 through 9 of this SPI. The coating shall be a minimum of 30 to 40 thousands of an inch thickness. The coating shall be as follows:
A polyurea coating either Olive Drab Green or Sand in Color. The cured stress/Tensile shall be between 2800 to 3000 psi. The cured Elongation @25 degrees C shall be between 350 and 375%. The cured Hardness shall be 90 Shore A. The cured Tear Strength Ply shall be a minimum of 400 PLI, When cured the thermal shock shall e a minimum of –65 degrees F with no effect.. When cured the impact notched shall be a minimum of 65 in–lbs./in. A suggest product that has demonstrated these requirements is InstaCote M–25. The Manufactures information is as follows:
InstaCoat, 160 C. Lavoy Rd., Erie, Michigan, USA 48133, Phone (734) 847–5260.

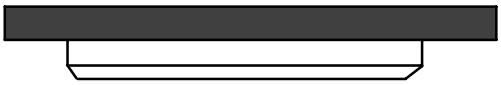
COATING APPLICATION AREAS TOP AND BOTTOM

OUTSIDE TOP VIEW

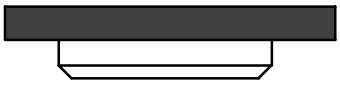
AREAS SHOWN LIKE THIS ARE COATED

AREAS SHOWN LIKE THIS ARE NOT COATED

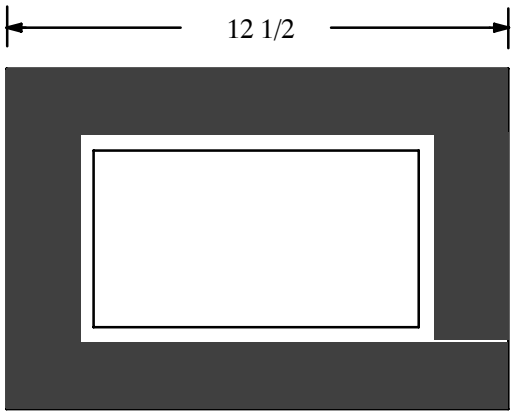
SIDE VIEW



END VIEW



INSIDE VIEW



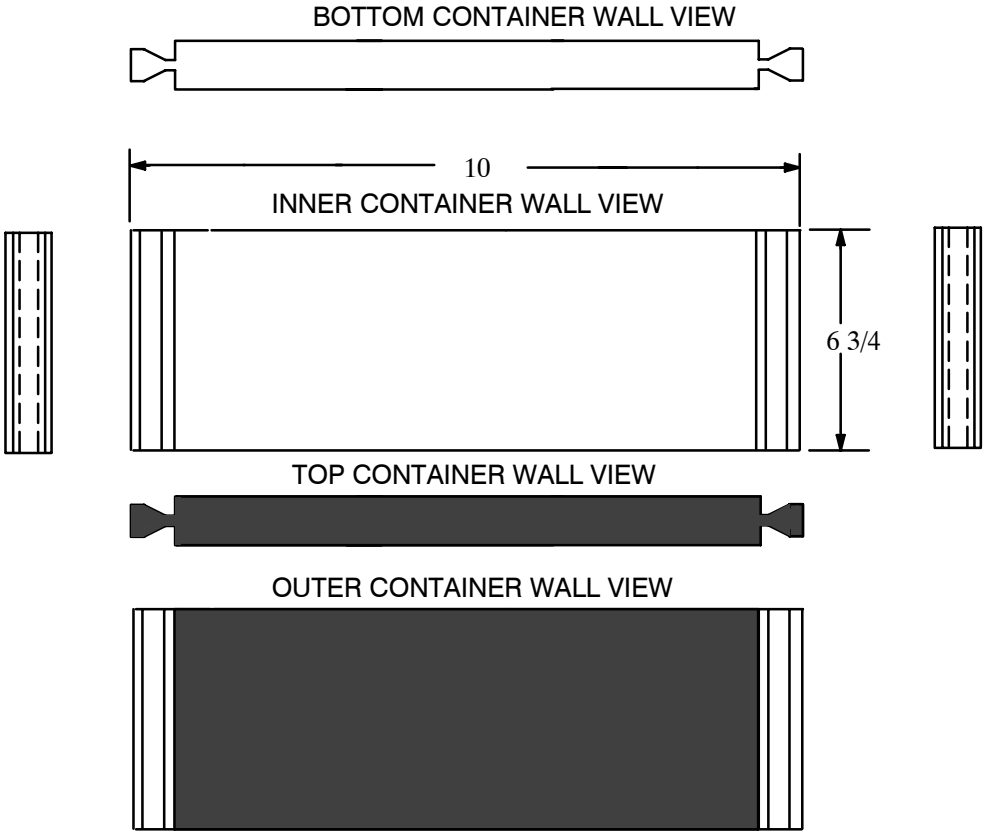
DRAWING NOT TO SCALE
FOR REFERENCE ONLY

NOTES:

THE CONTAINERS TOPS AND BOTTOMS CAN BE COATED BEFORE OR AFTER ASSEMBLY
INSIDE REFERS TO INSIDE SURFACE OF THE CONTAINER AFTER ASEMBLY
OUTSIDE REFERS TO THE OUTER SURFACE OF THE CONTAINER AFTER ASSEMBLY

COOLER SIDE

(2 Required)



FOR REFERENCE ONLY
DRAWING NOT TO SCALE

AREAS SHOWN LIKE THIS ARE NOT COATED

AREAS SHOWN LIKE THIS ARE COATED

NOTES:

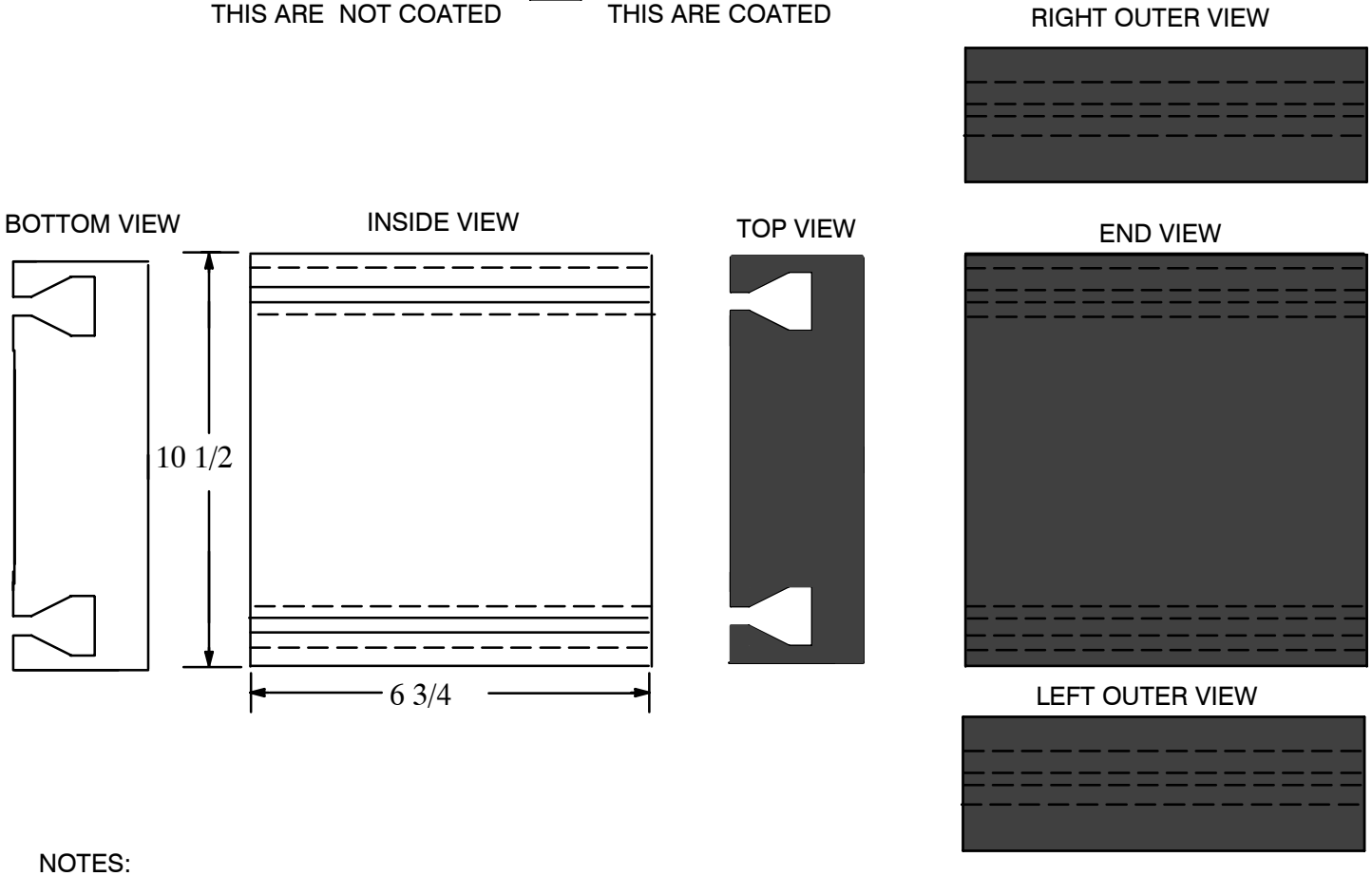
THE CONTAINER SIDES SHALL BE COATED AFTER ASSEMBLY
INSIDE REFERS TO INSIDE SURFACE OF THE CONTAINER AFTER ASEMBLY
OUTSIDE REFERS TO THE OUTER SURFACE OF THE CONTAINER AFTER ASSEMBLY

COATING APPLICATION AREAS OF THE COOLER ENDS

(2 Required)

AREAS SHOWN LIKE THIS ARE NOT COATED

AREAS SHOWN LIKE THIS ARE COATED



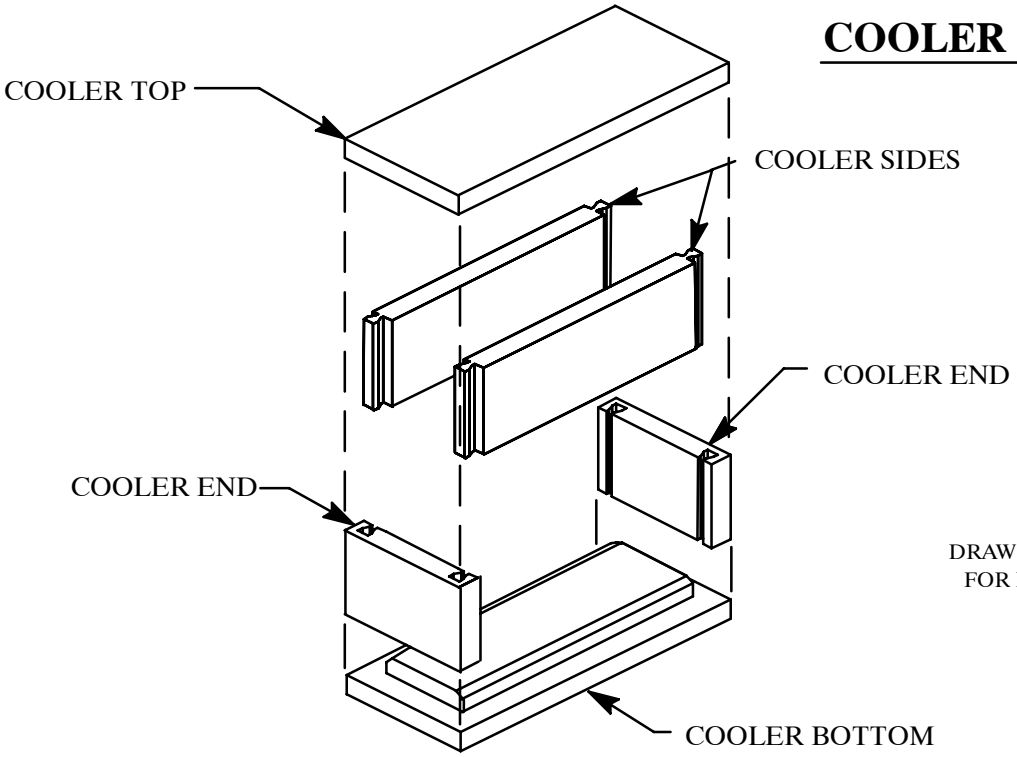
NOTES:

THE CONTAINER ENDS SHALL BE COATED AFTER ASSEMBLY
INSIDE REFERS TO INSIDE SURFACE OF THE CONTAINER AFTER ASEMBLY
OUTSIDE REFERS TO THE OUTER SURFACE OF THE CONTAINER AFTER ASSEMBLY

DRAWING NOT TO SCALE
FOR REFERENCE ONLY

(P) - Assemble the cooler pack as shown in this sketch.

COOLER PACK ASSEMBLY



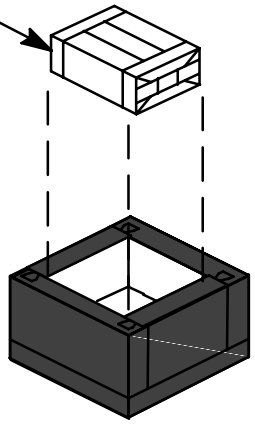
DRAWING NOT TO SCALE
FOR REFERENCE ONLY

NOTE:
APPLY COMMERCIAL SILICON SEALANT (WHITE OR CLEAR IN COLOR) AT ALL INSIDE SEAMS OF CONTAINER DURING ASSEMBLY. TO INSURE A WATER PROOF SEAL. SEALANT SHALL NOT BE PLACED ON THE LID OF THE CONTAINER TO EFFECT A CLOSURE

PLACEMENT OF THE PACKED SUPPLEMENTAL CONTAINER IN THE COOLER

Cooler top not shown for clarity.

ONE BOX ASSEMBLY CARRIER PACKED IN THE SUPPLEMENTAL CONTAINER, STEP 5 OF THIS SPI



Place one Box Assembly, Carriers packed in their Supplemental container as shown in this sketch.

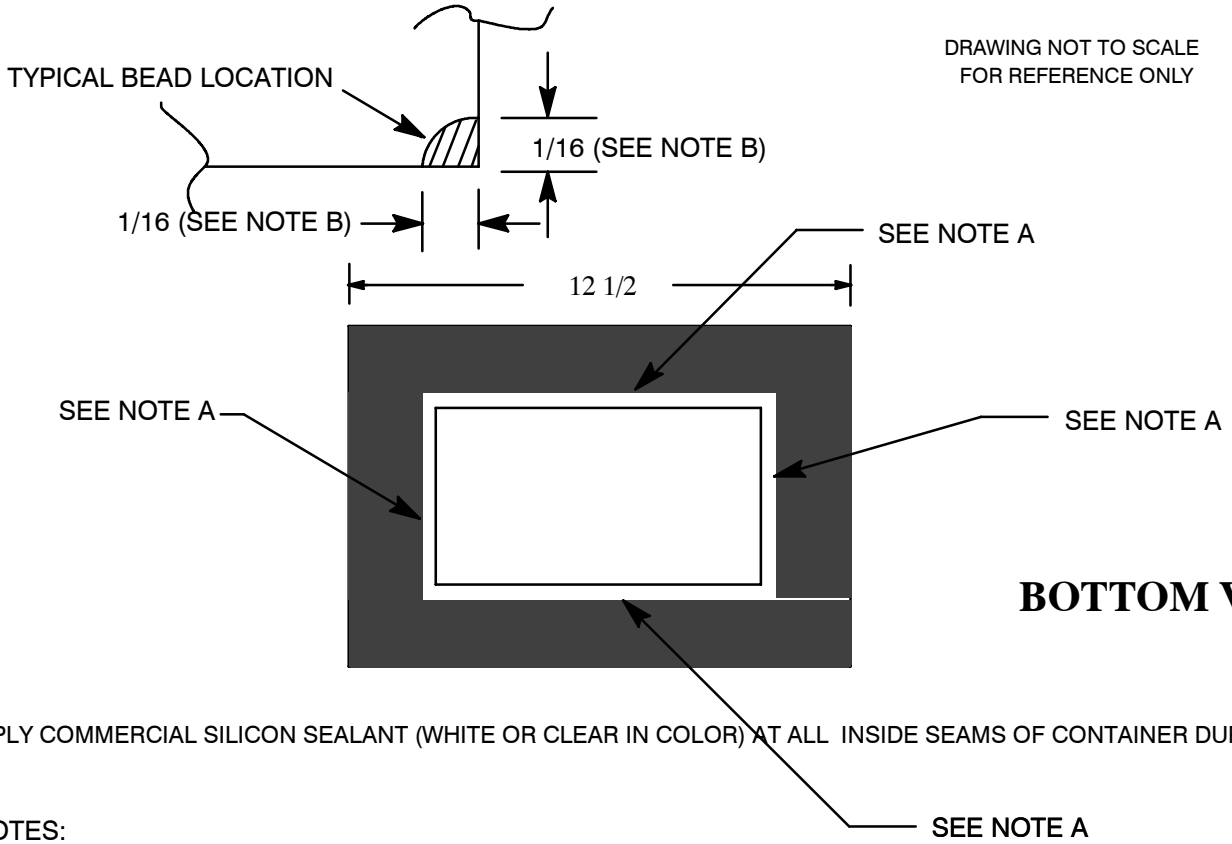
AREAS SHOWN LIKE THIS ARE COATED

AREAS SHOWN LIKE THIS ARE NOT COATED

DRAWING NOT TO SCALE FOR REFERENCE ONLY

(Q) – Exterior Shipping Container. The Cooler box shall serve as the exterior shipping container. Because the carrier assemblies need special environmental protection they shall not be shipped without the all packaging as specified on this SPI. Intermediate packing is not required.

PLACEMENT OF SEALING BEAD IN COOLER PACK LID



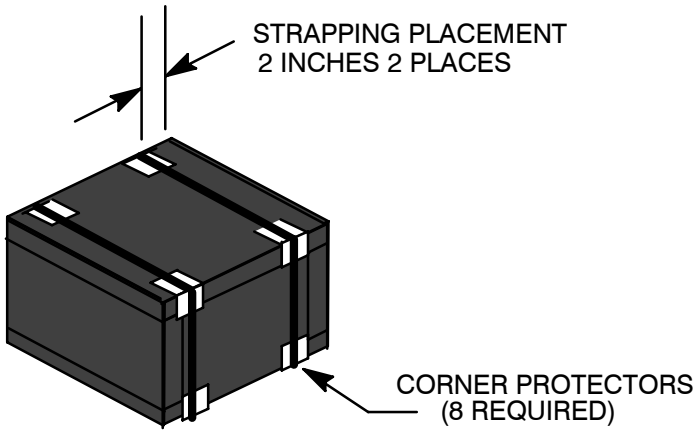
APPLY COMMERCIAL SILICON SEALANT (WHITE OR CLEAR IN COLOR) AT ALL INSIDE SEAMS OF CONTAINER DURING ASSEMBLY.

NOTES:

A. PRIOR TO PLACING THE LID IN PLACE, APPLY A BEAD OF CAULKING AROUND THE SEALING EDGE OF THE OF THE LID AS SHOWN. ALLOW THE BEAD TO CURE. FOLLOW THE CAULKING MANUFACTURES INSTRUCTIONS FOR THE APPLICATION OF THE CAULKING AND THE CURING TIME REQUIRED. THE CAULKING SHALL BE DRY AND SET BEFORE APPLYING THE LID TO THE BOX. THE CAULKING SHALL BE IN A COMMERCIAL SILICON SEALANT (WHITE OR CLEAR IN COLOR).

B. THE BEAD IS USED TO CREATE A SMALL INTERFERENCE FIT TO SEAL THE CONTAINER. MORE OR LESS BEAD MATERIAL IS AUTHORIZED AS LONG AS A SEAL IS ACCOMPLISHED UPON CLOSING.

COOLER BOX CLOSURE



Strapping of the Level A Shipping Container. Flat steel strapping shall be applied to the unit pack container as shown in the sketch above. Two straps are required. The strapping shall be placed as shown in the sketch above. Strapping shall be Type 1, Heavy Duty, Finish B, Grade 2, minimum 5/8 inches in width x 0.023 inches in thickness length as required. The metal seals shall be of the correct size, Heavy duty, Finish B, Grade 2, Style any. Both strapping and seals shall be in accordance with ASTM D 3953. Once tensioned, the steel strappings shall be secured with metal seals of the correct size to effect a strong closure.

DRAWING NOT TO SCALE
FOR REFERENCE ONLY

(R) – In addition to the marking requirements of MIL–STD–129 the following markings shall be applied to each carrier assembly fiberboard containers (step 6) :

a. Manufacture Date
b. Expiration Date
c. Lot Number
d. Shelf Life markings
e. Special Marking:

. **"PROTECT FROM FREEZING."**

In addition to the marking requirements of MIL–STD–129 the following markings shall be applied to the exterior shipping container:

a. Manufacture Date
b. Expiration Date
c. Lot Number
d. Shelf Life markings
e. Special marking

"PROTECT FROM FREEZING

TEMPERATURE SENSITIVE MATERIAL
EXPEDITE SHIPMENT AND MOVEMENT
APPLY TEMPERATURE CONTROL AT FINAL DESTINATION"

The additional special marking as shown in (Q) e. above, shall be marked in red print at least 48 point and placed on the marking side of the exterior shipping container. If there is not enough room on the marking side of the container. The label shall then placed on the top of the exterior shipping container.

(S) –PACKAGING QUALITY PERFORMANCE AND TESTING REQUIREMENTS

1. Classification of inspections. The inspection requirements for the packaged item described herein are classified as follows:
   (a) First article inspection
   (b) Conformance inspection
2. First Article inspection. The first article inspection and approval consists of the Contractor inspection of items prior to regular production.
   (a) Sampling. The first article packaging sample shall consist of not less than three unit pack containers and their contents, and when heat seal seam testing is required, three empty barrier bags. Packaged samples shall be taken from the quantity of first article sample items specified in QAP5–15–31917. Packaged samples shall be produced using the same methods, materials and equipment as will be used during regular production.
   (b) Examination. The packaged sample shall be examined in accordance with the visual preservation examinations (Table G–1) and the packing inspection examination procedures in Appendix G of MIL–STD–2073–1.
   (c) Leakage and heat seal seam tests. Sealed containers (in accordance with Method 41) shall be leak tested as specified in Appendix G of MIL–STD–2073–1. Sample barrier bags shall be destructively tested in accordance with the applicable heat seal seam test requirements in Appendix G of MIL–STD–2073–1. Testing of the barrier bag for Heat Seal Seam strength and leakage is required.
   (d) Acceptance criteria. First article samples that fail to comply with any of the applicable requirements shall be rejected.
3. Conformance Inspection.
   (a) Sampling. Sampling size shall be in accordance with the Attributes Sampling Plan Table of MIL–STD–1916. For examinations and leakage tests, Verification Level I shall be used. When heat seal seam tests are required, Verification Level II shall be used. Existing sampling plans in item specifications or quality assurance provisions shall take precedence.
4. Classification of characteristics. Quality conformance examinations and tests shall be as specified in Appendix G of MIL–STD–2073–1.

NOT APPLICABLE TO INTERPLANT SHIPMENT (A)

SPECIAL PACKAGING INSTRUCTION(SPI)

NATIONAL STOCK NUMBER
6665–01–526–4780

NOMENCLATURE	UI	QUP	SPI NUMBER (PN)
Box Assembly, Carrier	BX (C)	8 (C)	P5–15–31917–10

Cleaning & Drying shall be in accordance with MIL–STD–2073–1

MILTARY PRESERVATION REQUIREMENT **(B)** (MIL–STD–2073–1, Method41)	STEPS	DRAWING OR SPECIFICATION	STYLE	TYPE	GRADE	CLASS	SIZE AND REMARKS (INCHES)
Cushioning	(D) 1	A–A–59135			A	1	12 x 20 x 1/8 thick
Container	(E) 2	MIL–DTL–117	1	I		E	12 x 14
Dessicant	(F) 3	MIL–D–3464		II			One (1) Unit
Closure	(G) 4						Heat Seal
Supplemental Container	(H) 5	ASTM D 5118	RSC		W5c	WR	8 x 6 x 4 ID
Supplemental Closure	(I) 6	ASTM D 1974					Sealing Method B
Cooler Top	(J) (N) 7						
Cooler Bottom	(K) (N) 8						
Cooler End	(L) (N) 9						
Cooler Side	(M)(N)10						
Cooler Assembly	(0)(P)11						
Cooler Loading	12						See Sketch, Page 11
Cooler Pack Closure	13						See Sketch, Page 13

INTERMEDIATE MILITARY PRESERVATION AND PACKING
☐ In accordance with MIL–STD–2073–1
☒ As specified hereon. **See note (Q)**

MARKING
☒ In accordance with MIL–STD–129 **AND NOTE(R)**
☐ As specified hereon.

QUALITY PERFORMANCE AND TESTING REQUIREMENTS
☒ In accordance with MIL–STD–2073–1 **AND NOTE (S)**
☐ As specified hereon.

Unless otherwise specified, materials shall be minimum size in accordance with MIL–STD–2073–1. Tolerances shall be in accordance with material specifications.

UNIT PACK LOGISTICS DATA (Approximate unit packi weight and size)

Level	WEIGHT (POUNDS)	CUBE (CUBIC FEET)	SIZE (EXTERIOR FEET)
A	9.80 lbs.	2.903 cu. ft.	2.47 x 1.04 x 1.13

REMARKS/ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.

(A) – THIS SPI IS NOT APPLICABLE FOR INTERPLANT SHIPMENTS. Packaging and marking for interplant shipment is for supplies and materials that do not directly enter the military supply system. Typical interplant shipments are shipments from a vendor to a subcontractor or a prime contractor, or between contractors and subcontractors, or from a vendor or contractor to a military arsenal, plant, or other activity for evaluation, immediate use, or further processing as specified in the applicable contract.

(B) – The components, that make up the Box Assembly, Carrier shall be as specified on drawing 5–15–31917–10

ITEM DATA (APPROX)
ITEM CODE – 244, 245, 246, 247, 283
ITEM SIZE – 6 3/8 x 4 1/2 x 3 1/8
ITEM WEIGHT – .30 lbs

*Original Preparer*Dean Hansen
ECBC 81361
AMSRD–ECB–ENA–P

Revised by:

PAGE NUMBER	NUMBER OF PAGES
1	14

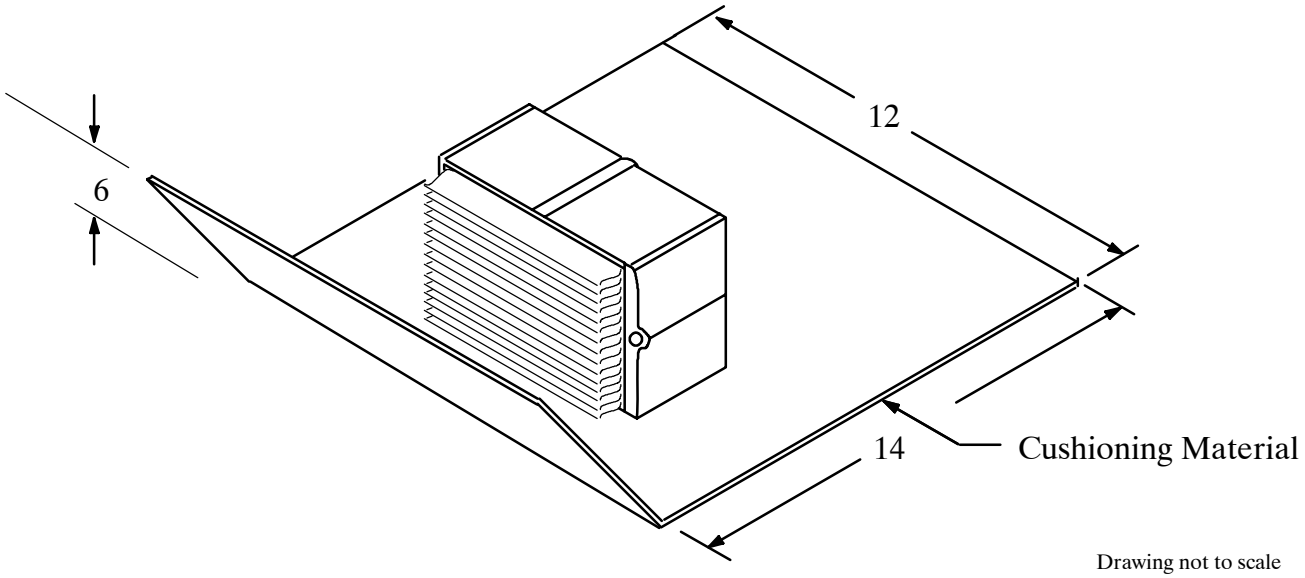
APPROVAL	REVISION	DATE
DVH 245–0017–009	–	30 Nov 07

DISTRIBUTION STATEMENT A: Approved for public release, distribution unlimited.

(C) – The unit of issue is box. The unit of measure for this pack is 8 Box Assembly, Carriers per unit pack container.

(D) – Start the wrap by covering the open face of the Box Assembly, Carriers with one 12 inch wide end of the cushioning material parallel to the top or bottom of the open face, and wrap to obtain a maximum number of cushioning layers across the open face. (See sketch on page 2) Secure wrap with tape conforming to ASTM D5486, Type I, class 1 or 2. Ensure that corners of wrapped item are securely taped. Tape shall not contact item.

PLACEMENT OF BAGGED BOX ASSEMBLY CARRIER IN CUSHIONING



Drawing not to scale
For Reference only

(E) – Place the cushioned and taped Box Assembly, Carriers in bag.

(F) – Desiccant shall be placed in the barrier bag step 2 of this SPI. The desiccant shall be 1 unit bag and conform to MIL–D–3464 type I or II. In addition place one humidity indicator card that covers a range of 10, 20, 30, 40, 50 and 60% and conforms to MIL–I–8835 into the bag. As an alternative a commercially available humidity indicator that covers a range of 10, 20, 30, 40, 50 and 60% may be substituted.

(G) – Closure of the barrier bag shall be accomplished by heat sealing. Heat sealing shall be accomplished in accordance with the barrier bag manufactures instructions. Excess air shall be removed from the barrier bag prior to heat sealing.

(H) – Place the bagged and cushioned Box Assembly Carrier into the supplemental container step 5 of this SPI. Staples shall not be used for the assembly of the supplemental container.

(I) – The closure of the supplemental container shall be in accordance with step 6 of this SPI. Staples shall not be used for the closure.

(J) – Fabricate the cooler top as shown on page 4 of this SPI. See step 7.

(K) – Fabricate the cooler bottom as shown on page 4 of this SPI. See step 8.

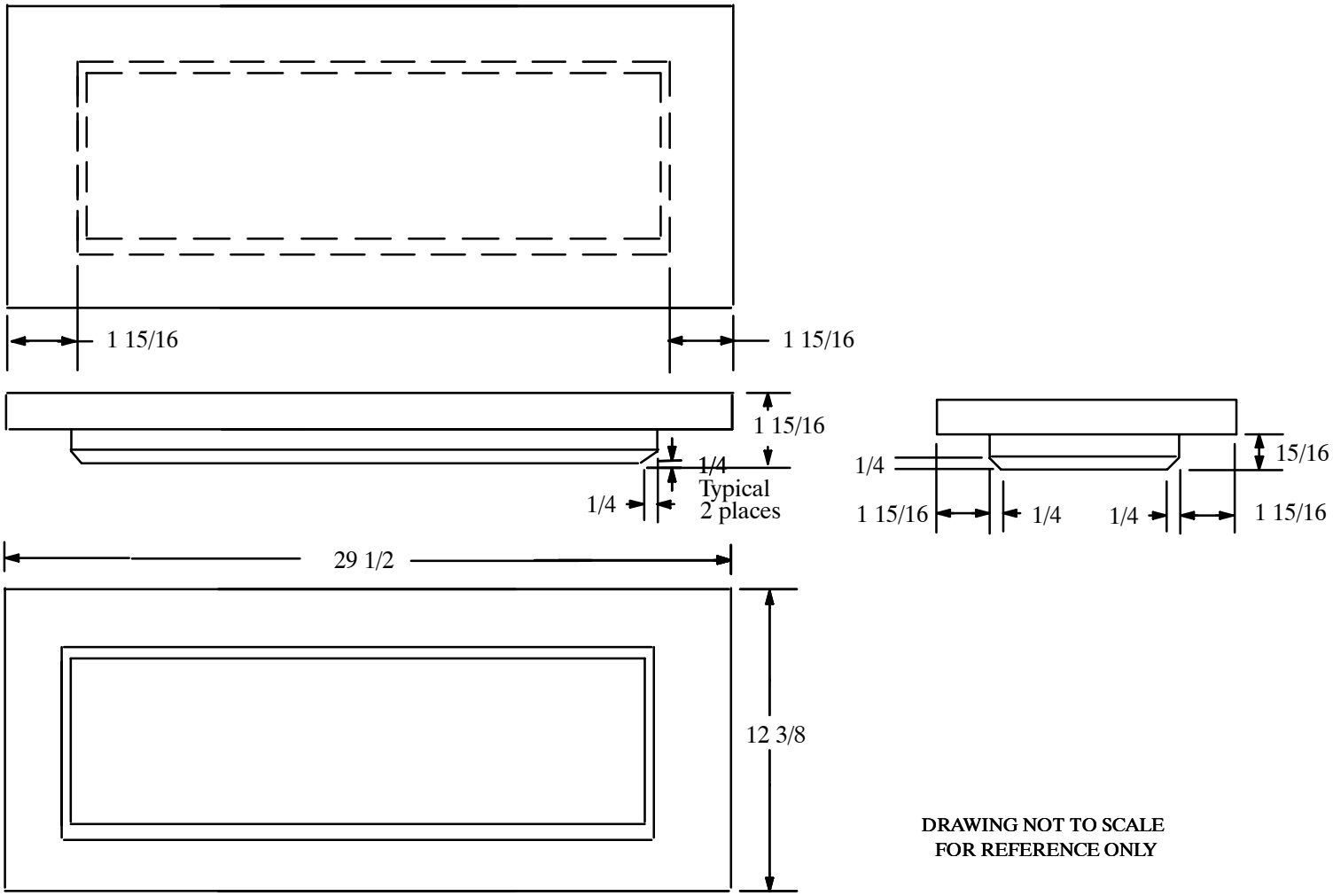
(L) – Fabricate the cooler end as shown on page 5 of this SPI. See step 9.

(M) – Fabricate the cooler Sides as shown on page 5 of this SPI. See step 10.

(N) – Polystyrene material used in the Intermediate pack. Material used for the intermediate cooler pack shall be 1.8 to 2.2 lbs density per cubic foot Polystyrene . The cooler pack shall be assembled in accordance with the sketch on page 6 of this SPI. The R or thermal value of the material used for the cooler pack shall be not less than 4.3 R–Value per 1 inch thickness of material. The standard tolerance for material shall be (+–) .09 inches. Suggested source of supply for the Polystyrene components of this pack is: FPM Expandable Polystyrene, 2053 Commerce Street, Lancaster, Ohio 43130, Phone number (740) 687–5934.

COOLER TOP AND BOTTOM

(2 Required)

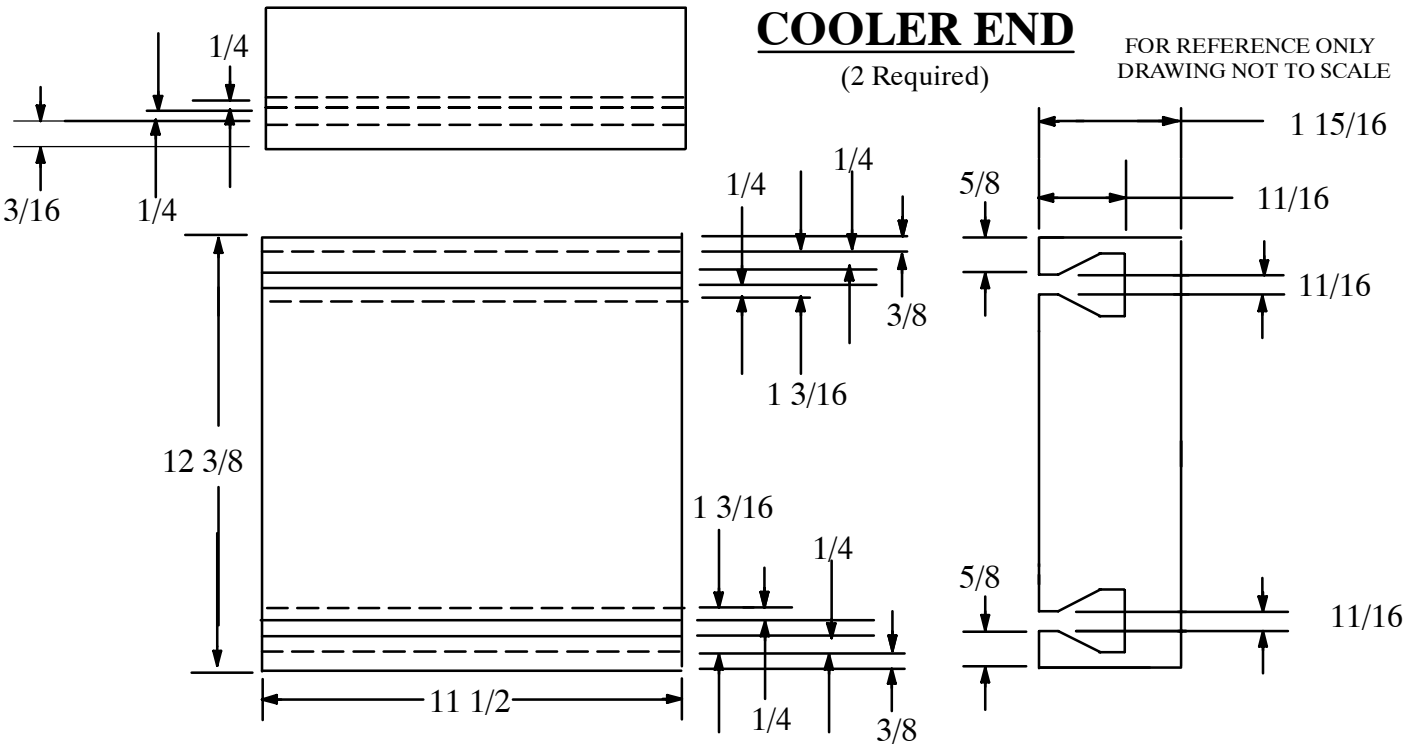


DRAWING NOT TO SCALE
FOR REFERENCE ONLY

COOLER END

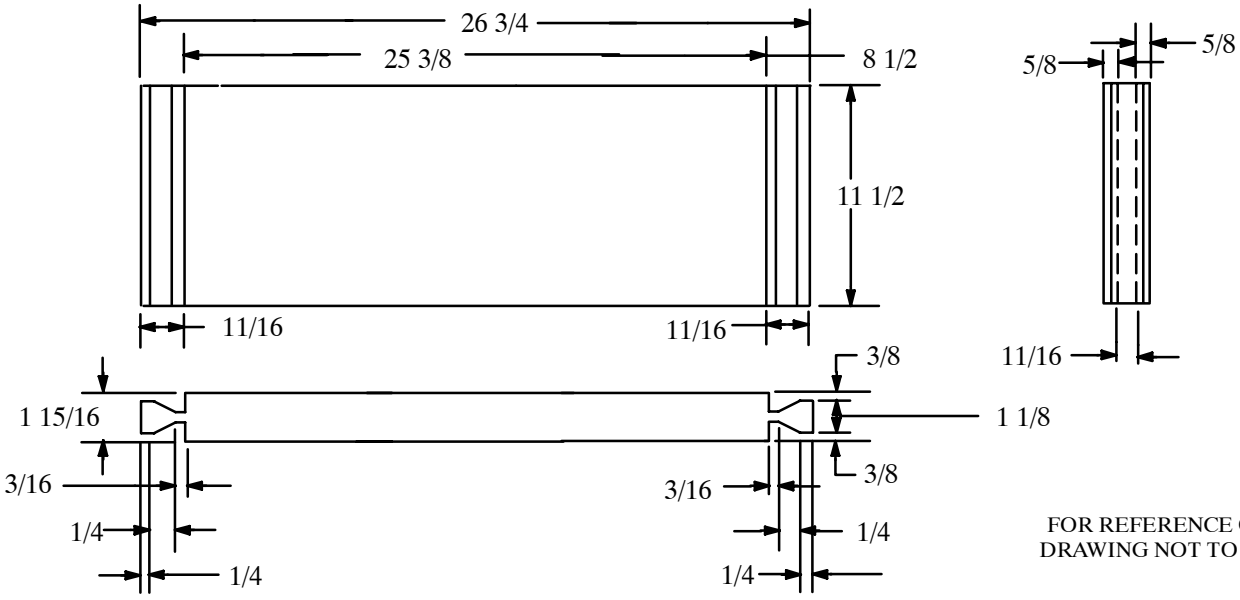
(2 Required)

FOR REFERENCE ONLY
DRAWING NOT TO SCALE



COOLER SIDE

(2 Required)



FOR REFERENCE ONLY
DRAWING NOT TO SCALE

(O)– Coating of the cooler pack assembly. The cooler pack shall have its exterior surfaces coated as shown on pages 6 through 9 of this SPI. The coating shall be a minimum of 30 to 40 thousands of an inch thickness. The coating shall be as follows:
A polyurea coating either Olive Drab Green or Sand in Color. The cured stress/Tensile shall be between 2800 to 3000 psi. The cured Elongation @25 degrees C shall be between 350 and 375%. The cured Hardness shall be 90 Shore A. The cured Tear Strength Ply shall be a minimum of 400 PLI, When cured the thermal shock shall e a minimum of –65 degrees F with no effect.. When cured the impact notched shall be a minimum of 65 in–lbs./in. A suggest product that has demonstrated these requirements is InstaCote M–25. The Manufactures information is as follows:
InstaCoat, 160 C. Lavoy Rd., Erie, Michigan, USA 48133, Phone (734) 847–5260.

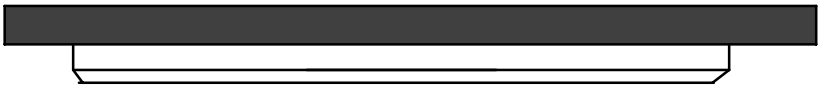
COATING APPLICATION AREAS TOP AND BOTTOM

OUTSIDE TOP VIEW

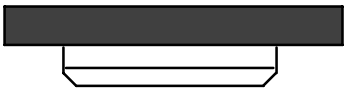
AREAS SHOWN LIKE THIS ARE COATED

AREAS SHOWN LIKE THIS ARE NOT COATED

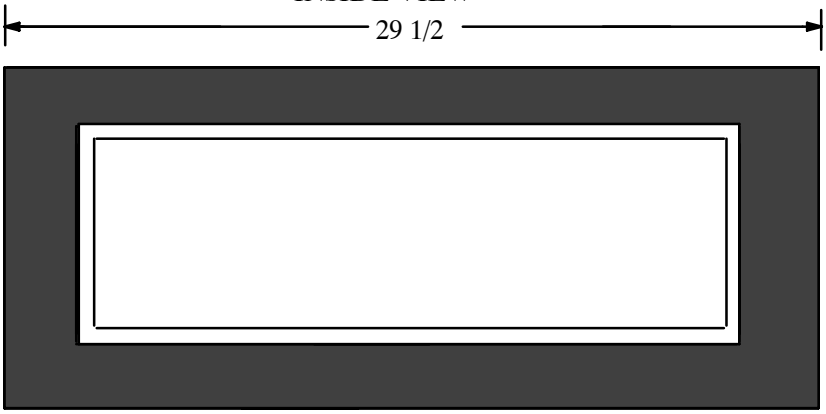
SIDE VIEW



END VIEW



INSIDE VIEW



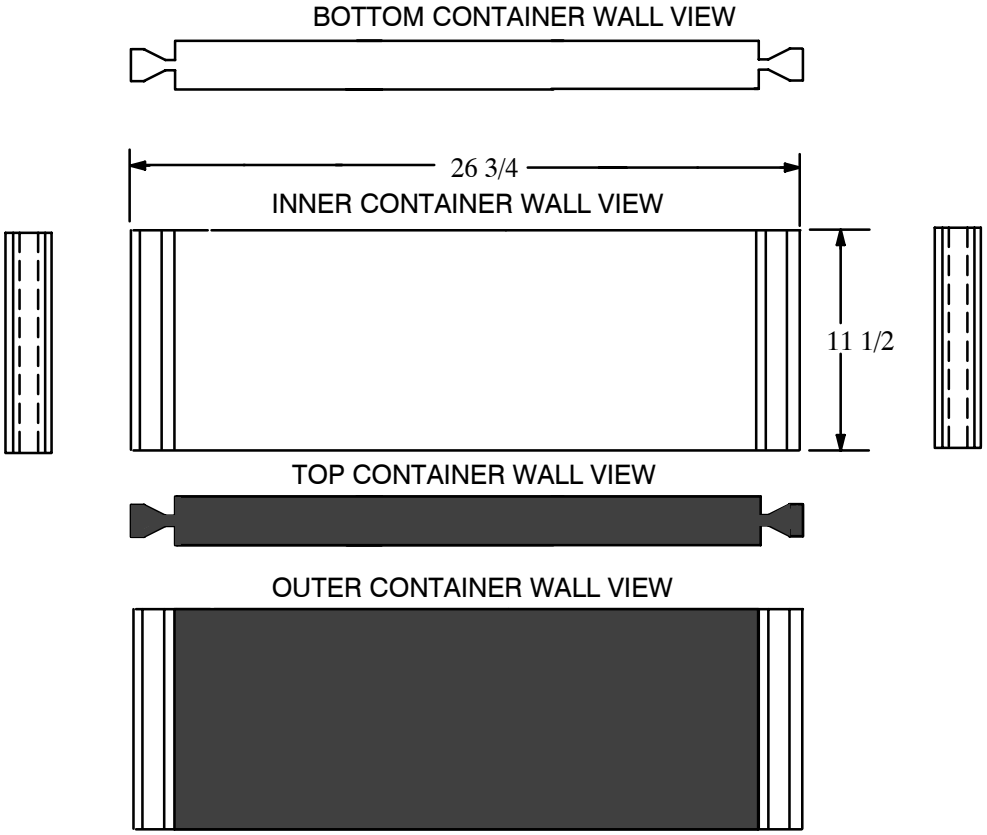
DRAWING NOT TO SCALE
FOR REFERENCE ONLY

NOTES:

THE CONTAINERS TOPS AND BOTTOMS CAN BE COATED BEFORE OR AFTER ASSEMBLY
INSIDE REFERS TO INSIDE SURFACE OF THE CONTAINER AFTER ASEMBLY
OUTSIDE REFERS TO THE OUTER SURFACE OF THE CONTAINER AFTER ASSEMBLY

COOLER SIDE

(2 Required)



FOR REFERENCE ONLY
DRAWING NOT TO SCALE

AREAS SHOWN LIKE THIS ARE NOT COATED

AREAS SHOWN LIKE THIS ARE COATED

NOTES:

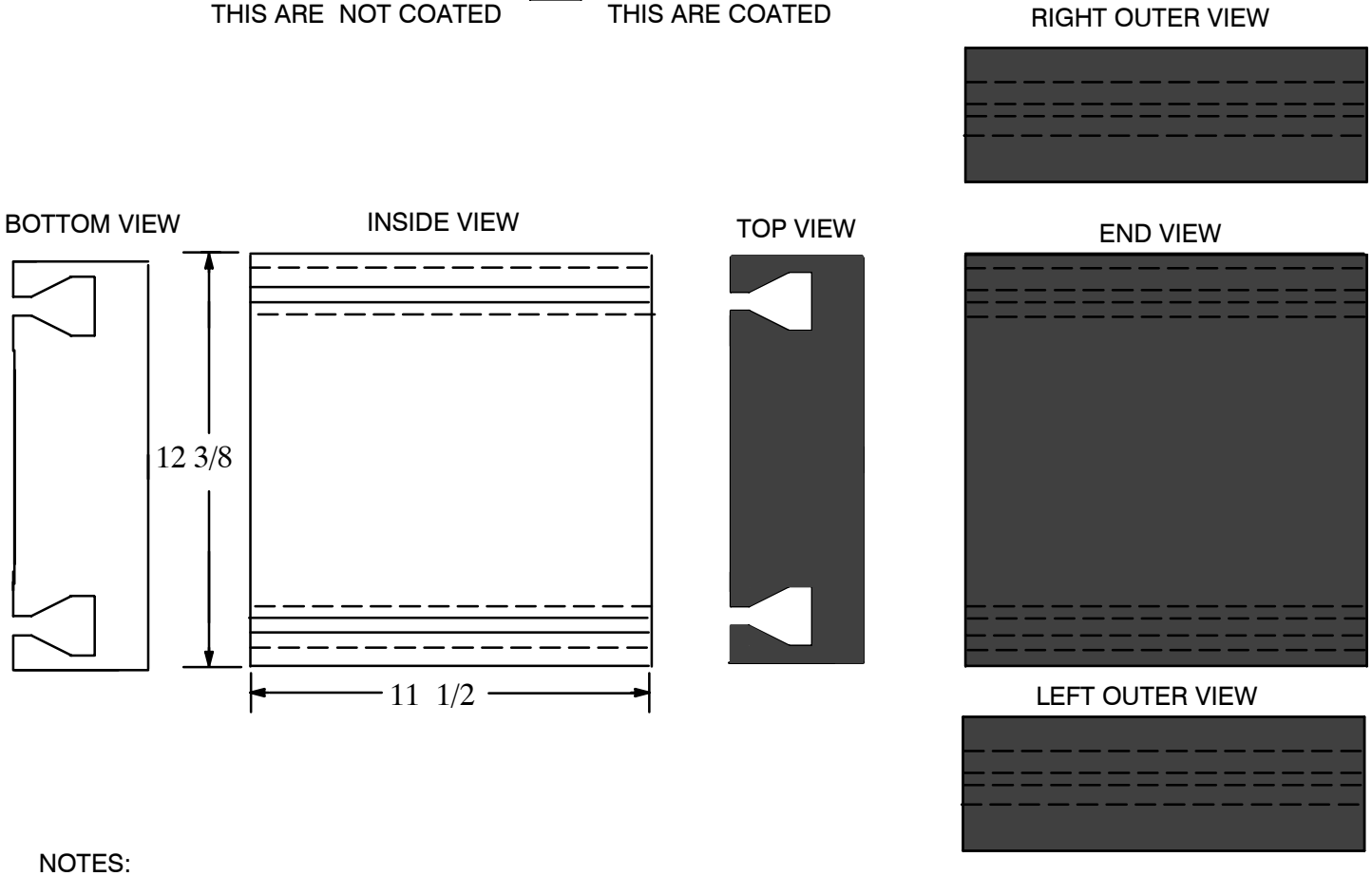
THE CONTAINER SIDES SHALL BE COATED AFTER ASSEMBLY
INSIDE REFERS TO INSIDE SURFACE OF THE CONTAINER AFTER ASEMBLY
OUTSIDE REFERS TO THE OUTER SURFACE OF THE CONTAINER AFTER ASSEMBLY

COATING APPLICATION AREAS OF THE COOLER ENDS

(2 Required)

AREAS SHOWN LIKE THIS ARE NOT COATED

AREAS SHOWN LIKE THIS ARE COATED



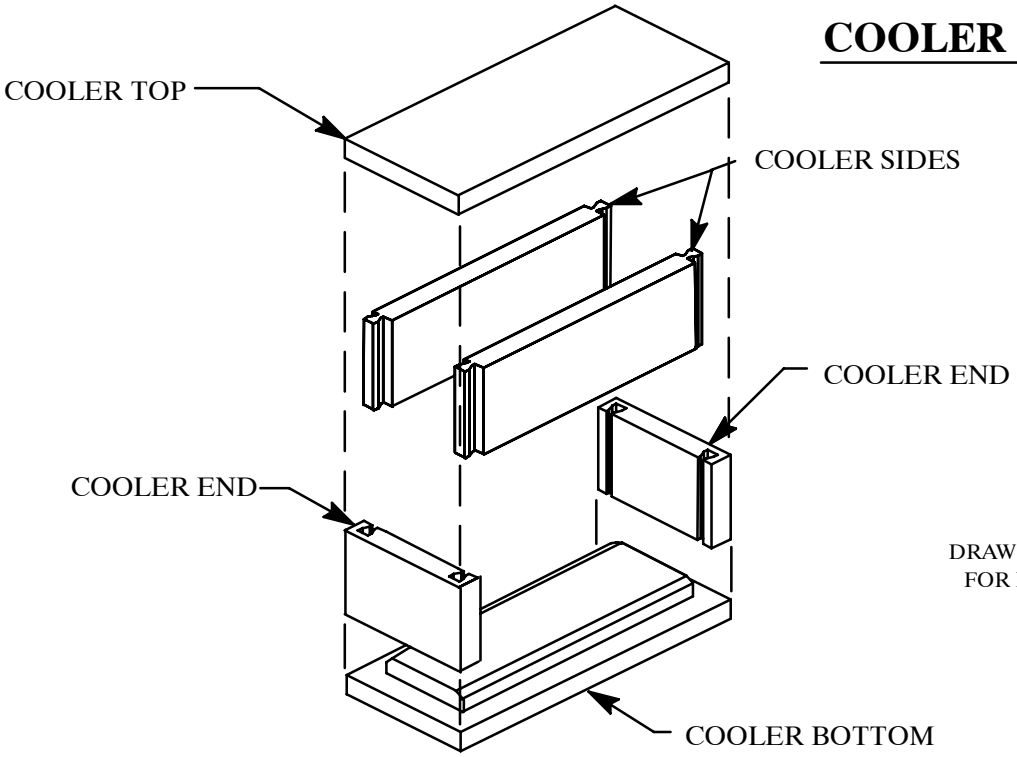
NOTES:

THE CONTAINER ENDS SHALL BE COATED AFTER ASSEMBLY
INSIDE REFERS TO INSIDE SURFACE OF THE CONTAINER AFTER ASEMBLY
OUTSIDE REFERS TO THE OUTER SURFACE OF THE CONTAINER AFTER ASSEMBLY

DRAWING NOT TO SCALE
FOR REFERENCE ONLY

(P) - Assemble the cooler pack as shown in this sketch.

COOLER PACK ASSEMBLY

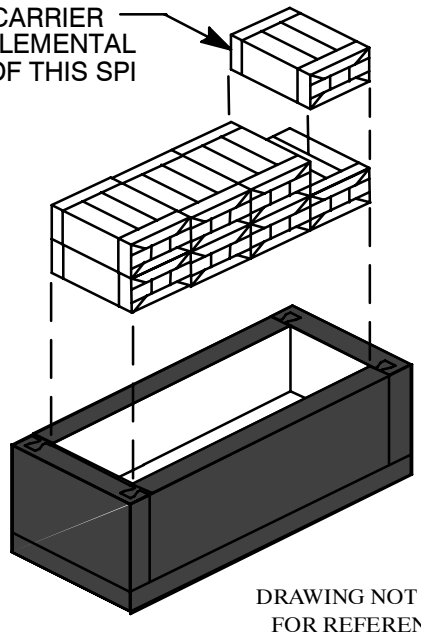


DRAWING NOT TO SCALE
FOR REFERENCE ONLY

NOTE:
APPLY COMMERCIAL SILICON SEALANT (WHITE OR CLEAR IN COLOR) AT ALL INSIDE SEAMS OF CONTAINER DURING ASSEMBLY. TO INSURE A WATER PROOF SEAL. SEALANT SHALL NOT BE PLACED ON THE LID OF THE CONTAINER TO EFFECT A CLOSURE

PLACEMENT OF THE PACKED SUPPLEMENTAL CONTAINERS IN THE COOLER

Place eight Box Assembly, Carriers packed in their Supplemental container as shown in this sketch. There shall be two layers of 10 Box Assembly Carriers as shown.



Cooler top not shown for clarity.

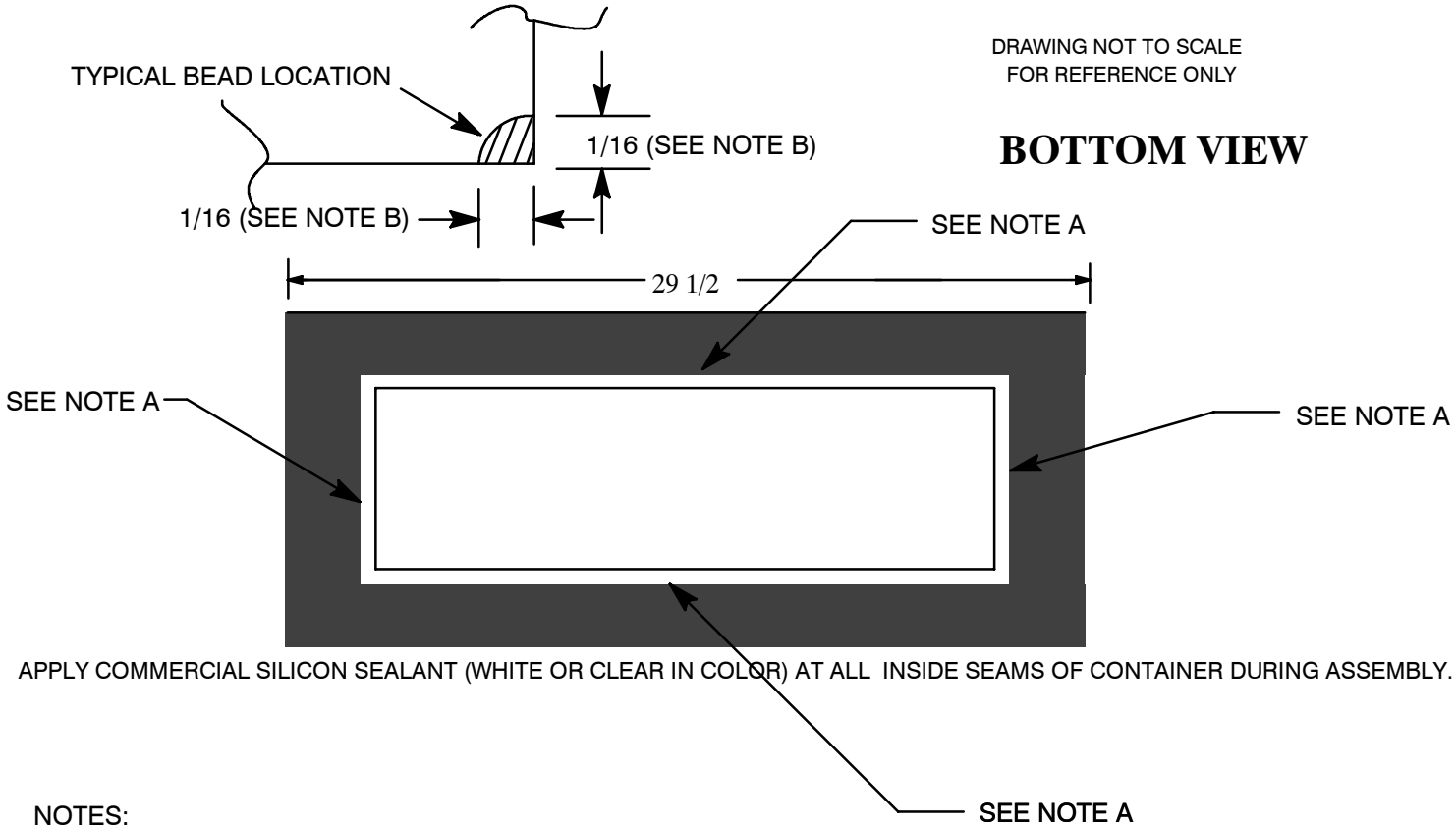
AREAS SHOWN LIKE THIS ARE COATED

AREAS SHOWN LIKE THIS ARE NOT COATED

DRAWING NOT TO SCALE FOR REFERENCE ONLY

(Q) – Exterior Shipping Container. The Cooler box shall serve as the exterior shipping container. Because the carrier assemblies need special environmental protection they shall not be shipped without the all packaging as specified on this SPI. Intermediate packing is not required.

PLACEMENT OF SEALING BEAD IN COOLER PACK LID



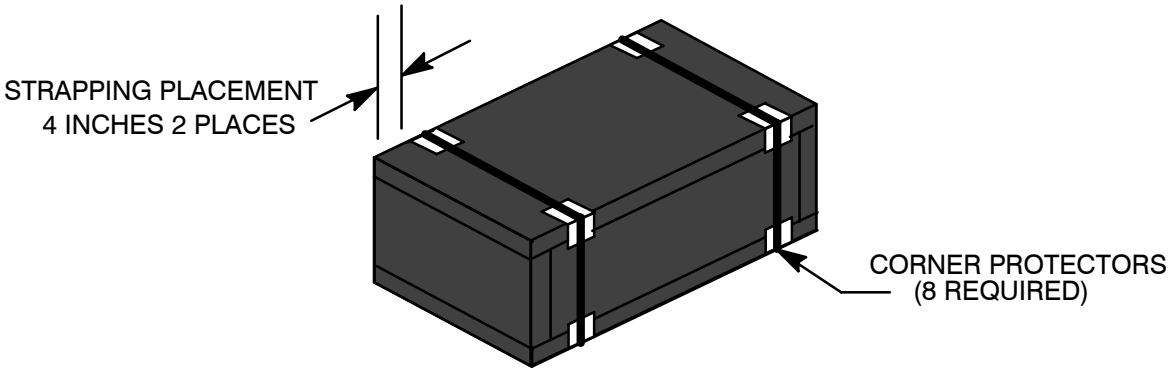
APPLY COMMERCIAL SILICON SEALANT (WHITE OR CLEAR IN COLOR) AT ALL INSIDE SEAMS OF CONTAINER DURING ASSEMBLY.

NOTES:

A. PRIOR TO PLACING THE LID IN PLACE, APPLY A BEAD OF CAULKING AROUND THE SEALING EDGE OF THE OF THE LID AS SHOWN. ALLOW THE BEAD TO CURE. FOLLOW THE CAULKING MANUFACTURES INSTRUCTIONS FOR THE APPLICATION OF THE CAULKING AND THE CURING TIME REQUIRED. THE CAULKING SHALL BE DRY AND SET BEFORE APPLYING THE LID TO THE BOX. THE CAULKING SHALL BE IN A COMMERCIAL SILICON SEALANT (WHITE OR CLEAR IN COLOR).

B. THE BEAD IS USED TO CREATE A SMALL INTERFERENCE FIT TO SEAL THE CONTAINER. MORE OR LESS BEAD MATERIAL IS AUTHORIZED AS LONG AS A SEAL IS ACCOMPLISHED UPON CLOSING.

COOLER BOX CLOSURE



Strapping of the Level A Shipping Container. Flat steel strapping shall be applied to the unit pack container as shown in the sketch above. Two straps are required. The strapping shall be placed as shown in the sketch above. Strapping shall be Type 1, Heavy Duty, Finish B, Grade 2, minimum 5/8 inches in width x 0.023 inches in thickness length as required. The metal seals shall be of the correct size, Heavy duty, Finish B, Grade 2, Style any. Both strapping and seals shall be in accordance with ASTM D 3953. Once tensioned, the steel strappings shall be secured with metal seals of the correct size to effect a strong closure.

DRAWING NOT TO SCALE
FOR REFERENCE ONLY

(R) – In addition to the marking requirements of MIL–STD–129 the following markings shall be applied to each carrier assembly fiberboard containers (step 6) :

a. Manufacture Date
b. Expiration Date
c. Lot Number
d. Shelf Life markings
e. Special Marking:

. **"PROTECT FROM FREEZING."**

In addition to the marking requirements of MIL–STD–129 the following markings shall be applied to the exterior shipping container:

a. Manufacture Date
b. Expiration Date
c. Lot Number
d. Shelf Life Marking
e. Special Marking:

"PROTECT FROM FREEZING

TEMPERATURE SENSITIVE MATERIAL
EXPEDITE SHIPMENT AND MOVEMENT
APPLY TEMPERATURE CONTROL AT FINAL DESTINATION"

The additional special marking as shown in (Q) e. above, shall be marked in red print at least 48 point and placed on the marking side of the exterior shipping container. If there is not enough room on the marking side of the container. The label shall then placed on the top of the exterior shipping container.

(S) – PACKAGING QUALITY PERFORMANCE AND TESTING REQUIREMENTS

1. Classification of inspections. The inspection requirements for the packaged item described herein are classified as follows:
   (a) First article inspection
   (b) Conformance inspection
2. First Article inspection. The first article inspection and approval consists of the Contractor inspection of items prior to regular production.
   (a) Sampling. The first article packaging sample shall consist of not less than three unit pack containers and their contents, and when heat seal seam testing is required, three empty barrier bags. Packaged samples shall be taken from the quantity of first article sample items specified in QAP5–15–31917. Packaged samples shall be produced using the same methods, materials and equipment as will be used during regular production.
   (b) Examination. The packaged sample shall be examined in accordance with the visual preservation examinations (Table G–1) and the packing inspection examination procedures in Appendix G of MIL–STD–2073–1.
   (c) Leakage and heat seal seam tests. Sealed containers (in accordance with Method 41) shall be leak tested as specified in Appendix G of MIL–STD–2073–1. Sample barrier bags shall be destructively tested in accordance with the applicable heat seal seam test requirements in Appendix G of MIL–STD–2073–1. Testing of the barrier bag for Heat Seal Seam strength and leakage is required.
   (d) Acceptance criteria. First article samples that fail to comply with any of the applicable requirements shall be rejected.
3. Conformance Inspection.
   (a) Sampling. Sampling size shall be in accordance with the Attributes Sampling Plan Table of MIL–STD–1916. For examinations and leakage tests, Verification Level I shall be used. When heat seal seam tests are required, Verification Level II shall be used. Existing sampling plans in item specifications or quality assurance provisions shall take precedence.
4. Classification of characteristics. Quality conformance examinations and tests shall be as specified in Appendix G of MIL–STD–2073–1.

NOT APPLICABLE TO INTERPLANT SHIPMENT (A)

SPECIAL PACKAGING INSTRUCTION(SPI)

NATIONAL STOCK NUMBER
6665–01–541–8943

NOMENCLATURE	UI	QUP	SPI NUMBER (PN)
Box Assembly, Carrier	BX (C)	8 (C)	P5–15–31917–60

Cleaning & Drying shall be in accordance with MIL–STD–2073–1

MILTARY PRESERVATION REQUIREMENT **(B)** (MIL–STD–2073–1, Method41)	STEPS	DRAWING OR SPECIFICATION	STYLE	TYPE	GRADE	CLASS	SIZE AND REMARKS (INCHES)
Cushioning	(D) 1	A–A–59135			A	1	12 x 20 x 1/8 thick
Container	(E) 2	MIL–DTL–117	1	I		E	12 x 14
Dessicant	(F) 3	MIL–D–3464		II			One (1) Unit
Closure	(G) 4						Heat Seal
Supplemental Container	(H) 5	ASTM D 5118	RSC		W5c	WR	8 x 6 x 4 ID
Supplemental Closure	(I) 6	ASTM D 1974					Sealing Method B
Cooler Top	(J) (N) 7						
Cooler Bottom	(K) (N) 8						
Cooler End	(L) (N) 9						
Cooler Side	(M)(N)10						
Cooler Assembly	(0)(P)11						
Cooler Loading	12						See Sketch, Page 11
Cooler Pack Closure	13						See Sketch, Page 13

INTERMEDIATE MILITARY PRESERVATION AND PACKING
☐ In accordance with MIL–STD–2073–1
☒ As specified hereon. **See note (Q)**

MARKING
☒ In accordance with MIL–STD–129 **AND NOTE(R)**
☐ As specified hereon.

QUALITY PERFORMANCE AND TESTING REQUIREMENTS
☒ In accordance with MIL–STD–2073–1 **AND NOTE (S)**
☐ As specified hereon.

Unless otherwise specified, materials shall be minimum size in accordance with MIL–STD–2073–1. Tolerances shall be in accordance with material specifications.

UNIT PACK LOGISTICS DATA (Approximate unit packi weight and size)

Level	WEIGHT (POUNDS)	CUBE (CUBIC FEET)	SIZE (EXTERIOR FEET)
A	9.80 lbs.	2.903 cu. ft.	2.47 x 1.04 x 1.13

REMARKS/ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.

(A) – THIS SPI IS NOT APPLICABLE FOR INTERPLANT SHIPMENTS. Packaging and marking for interplant shipment is for supplies and materials that do not directly enter the military supply system. Typical interplant shipments are shipments from a vendor to a subcontractor or a prime contractor, or between contractors and subcontractors, or from a vendor or contractor to a military arsenal, plant, or other activity for evaluation, immediate use, or further processing as specified in the applicable contract.

(B) – The components, that make up the Box Assembly, Carrier shall be as specified on drawing 5–15–31917–60.

ITEM DATA (APPROX)
ITEM CODE – 244, 245, 246, 247, 283
ITEM SIZE – 6 3/8 x 4 1/2 x 3 1/8
ITEM WEIGHT – .30 lbs

*Original Preparer*Dean Hansen

ECBC 81361
AMSRD–ECB–ENA–P

PAGE NUMBER	NUMBER OF PAGES
1	14

Revised by: Dean Hansen 30 Jan 2008

DRAFT

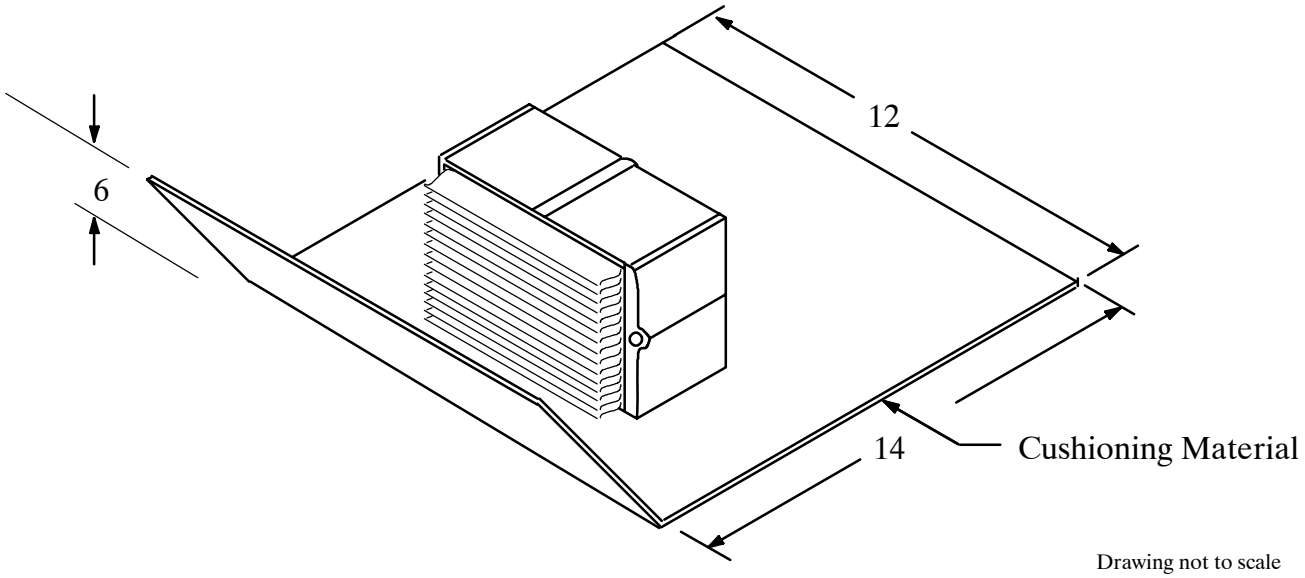
APPROVAL	REVISION	DATE
DVH 245–0017–014	–	30 Nov 07

DISTRIBUTION STATEMENT A: Approved for public release, distribution unlimited.

(C) – The unit of issue is box. The unit of measure for this pack is 8 Box Assembly, Carriers per unit pack container.

(D) – Start the wrap by covering the open face of the Box Assembly, Carriers with one 12 inch wide end of the cushioning material parallel to the top or bottom of the open face, and wrap to obtain a maximum number of cushioning layers across the open face. (See sketch on page 2) Secure wrap with tape conforming to ASTM D5486, Type I, class 1 or 2. Ensure that corners of wrapped item are securely taped. Tape shall not contact item.

PLACEMENT OF BAGGED BOX ASSEMBLY CARRIER IN CUSHIONING



Drawing not to scale
For Reference only

(E) – Place the cushioned and taped Box Assembly, Carriers in bag.

(F) – Desiccant shall be placed in the barrier bag step 2 of this SPI. The desiccant shall be 1 unit bag and conform to MIL–D–3464 type I or II. In addition place one humidity indicator card that covers a range of 10, 20, 30, 40, 50 and 60% and conforms to MIL–I–8835 into the bag. As an alternative a commercially available humidity indicator that covers a range of 10, 20, 30, 40, 50 and 60% may be substituted.

(G) – Closure of the barrier bag shall be accomplished by heat sealing. Heat sealing shall be accomplished in accordance with the barrier bag manufactures instructions. Excess air shall be removed from the barrier bag prior to heat sealing.

(H) – Place the bagged and cushioned Box Assembly Carrier into the supplemental container step 5 of this SPI. Staples shall not be used for the assembly of the supplemental container.

(I) – The closure of the supplemental container shall be in accordance with step 6 of this SPI. Staples shall not be used for the closure.

(J) – Fabricate the cooler top as shown on page 4 of this SPI. See step 7.

(K) – Fabricate the cooler bottom as shown on page 4 of this SPI. See step 8.

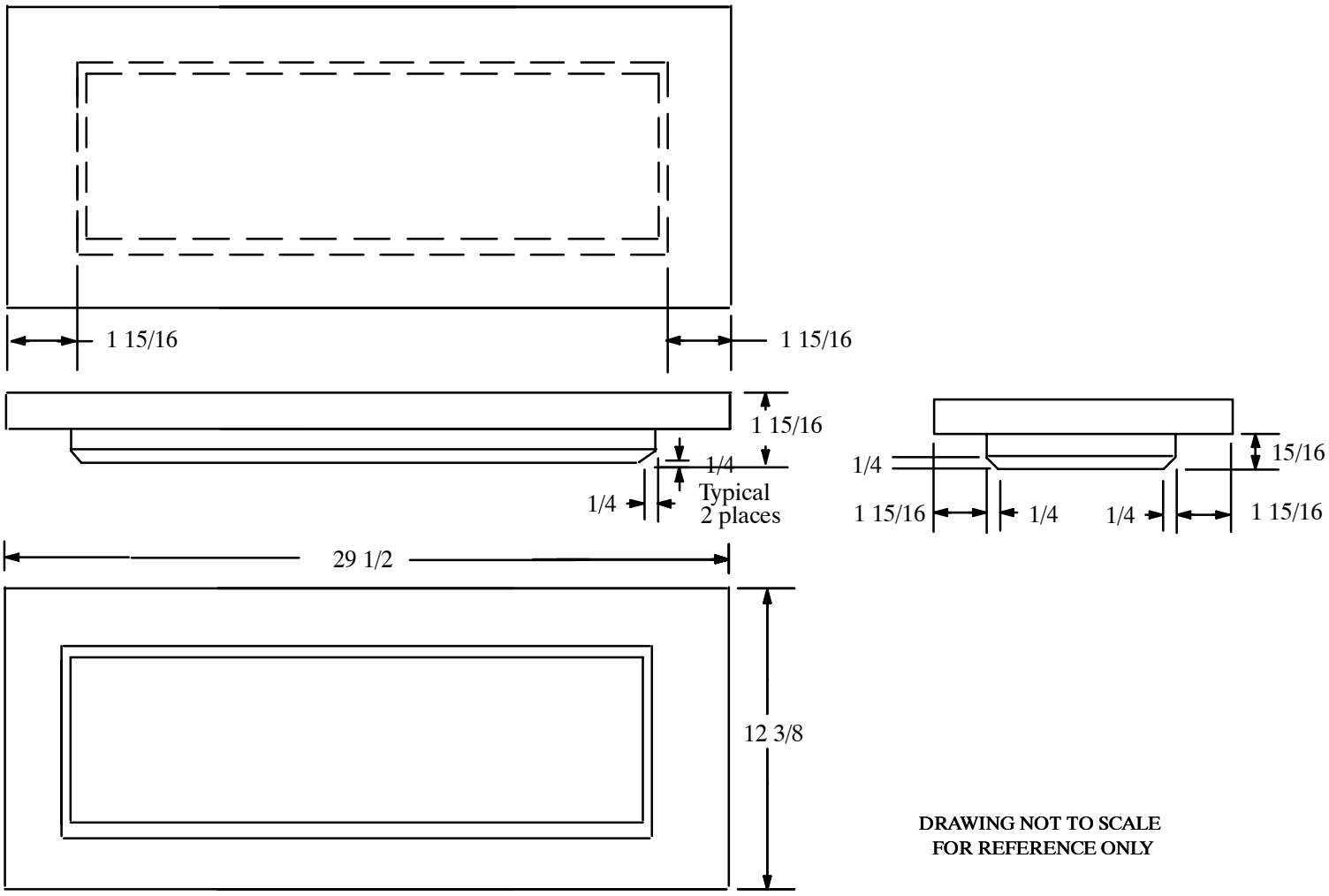
(L) – Fabricate the cooler end as shown on page 5 of this SPI. See step 9.

(M) – Fabricate the cooler Sides as shown on page 5 of this SPI. See step 10.

(N) – Polystyrene material used in the Intermediate pack. Material used for the intermediate cooler pack shall be 1.8 to 2.2 lbs density per cubic foot Polystyrene . The cooler pack shall be assembled in accordance with the sketch on page 6 of this SPI. The R or thermal value of the material used for the cooler pack shall be not less than 4.3 R–Value per 1 inch thickness of material. The standard tolerance for material shall be (+–) .09 inches. Suggested source of supply for the Polystyrene components of this pack is: FPM Expandable Polystyrene, 2053 Commerce Street, Lancaster, Ohio 43130, Phone number (740) 687–5934.

COOLER TOP AND BOTTOM

(2 Required)

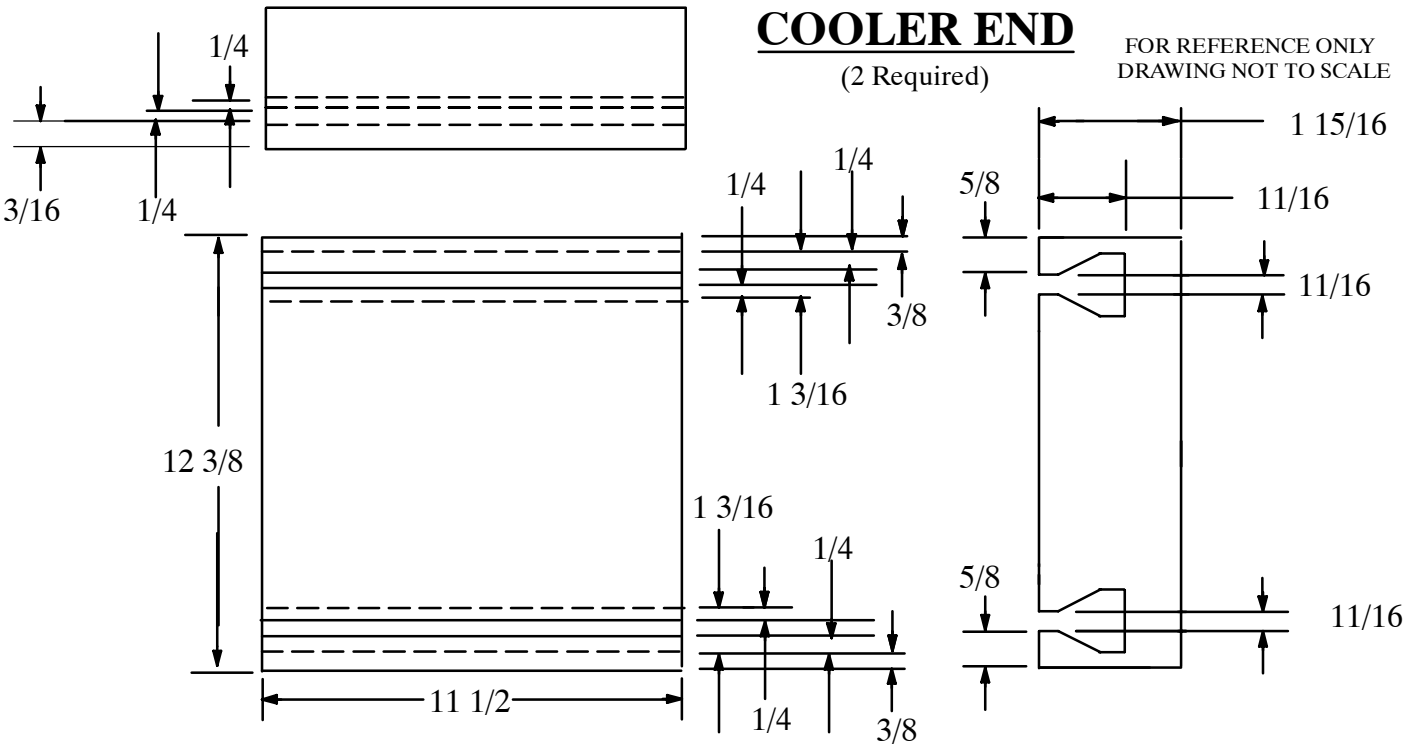


DRAWING NOT TO SCALE
FOR REFERENCE ONLY

COOLER END

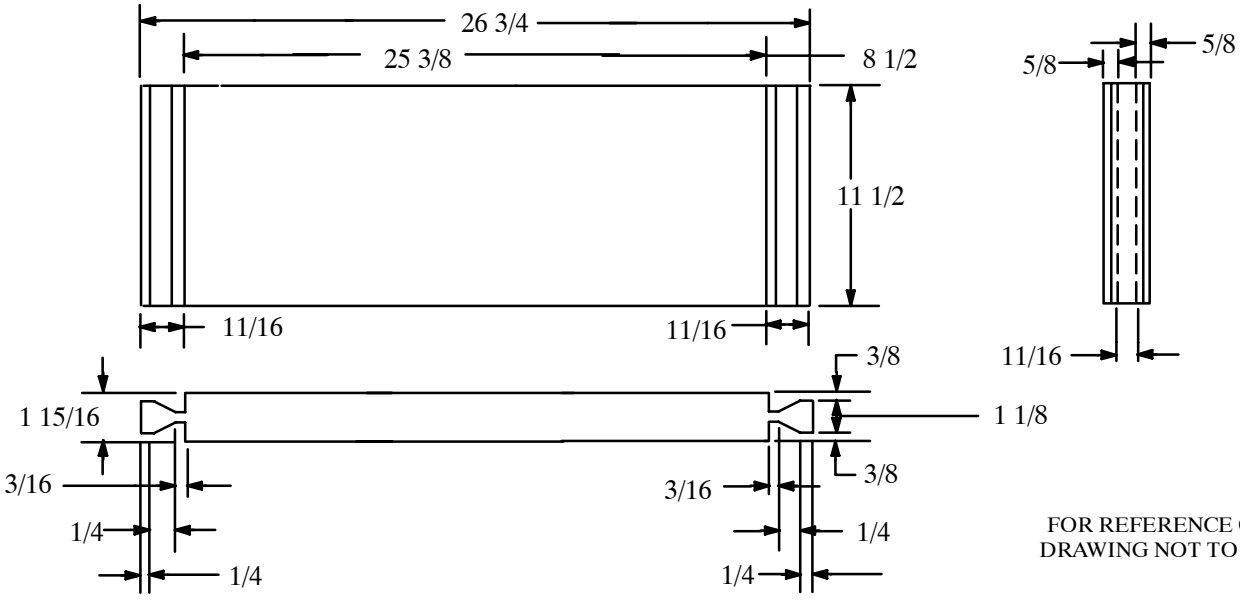
(2 Required)

FOR REFERENCE ONLY
DRAWING NOT TO SCALE



COOLER SIDE

(2 Required)



FOR REFERENCE ONLY
DRAWING NOT TO SCALE

(O) – Coating of the cooler pack assembly. The cooler pack shall have its exterior surfaces coated as shown on pages 6 through 9 of this SPI. The coating shall be a minimum of 30 to 40 thousands of an inch thickness. The coating shall be as follows:
A polyurea coating either Olive Drab Green or Sand in Color. The cured stress/Tensile shall be between 2800 to 3000 psi. The cured Elongation @25 degrees C shall be between 350 and 375%. The cured Hardness shall be 90 Shore A. The cured Tear Strength Ply shall be a minimum of 400 PLI, When cured the thermal shock shall e a minimum of –65 degrees F with no effect.. When cured the impact notched shall be a minimum of 65 in–lbs./in. A suggest product that has demonstrated these requirements is InstaCote M–25. The Manufactures information is as follows:
InstaCoat, 160 C. Lavoy Rd., Erie, Michigan, USA 48133, Phone (734) 847–5260.

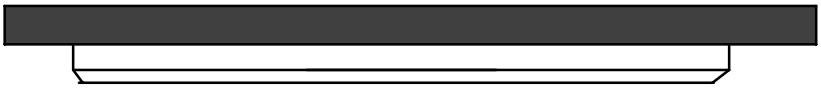
COATING APPLICATION AREAS TOP AND BOTTOM

OUTSIDE TOP VIEW

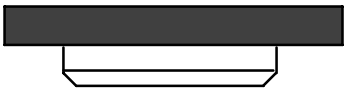
AREAS SHOWN LIKE THIS ARE COATED

AREAS SHOWN LIKE THIS ARE NOT COATED

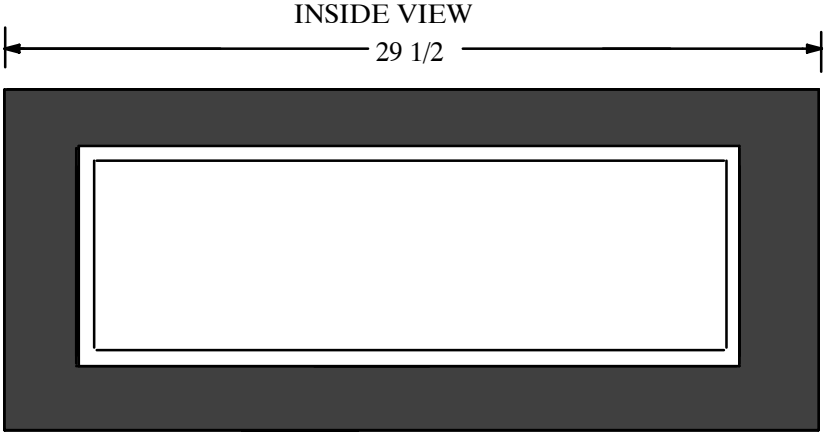
SIDE VIEW



END VIEW



INSIDE VIEW



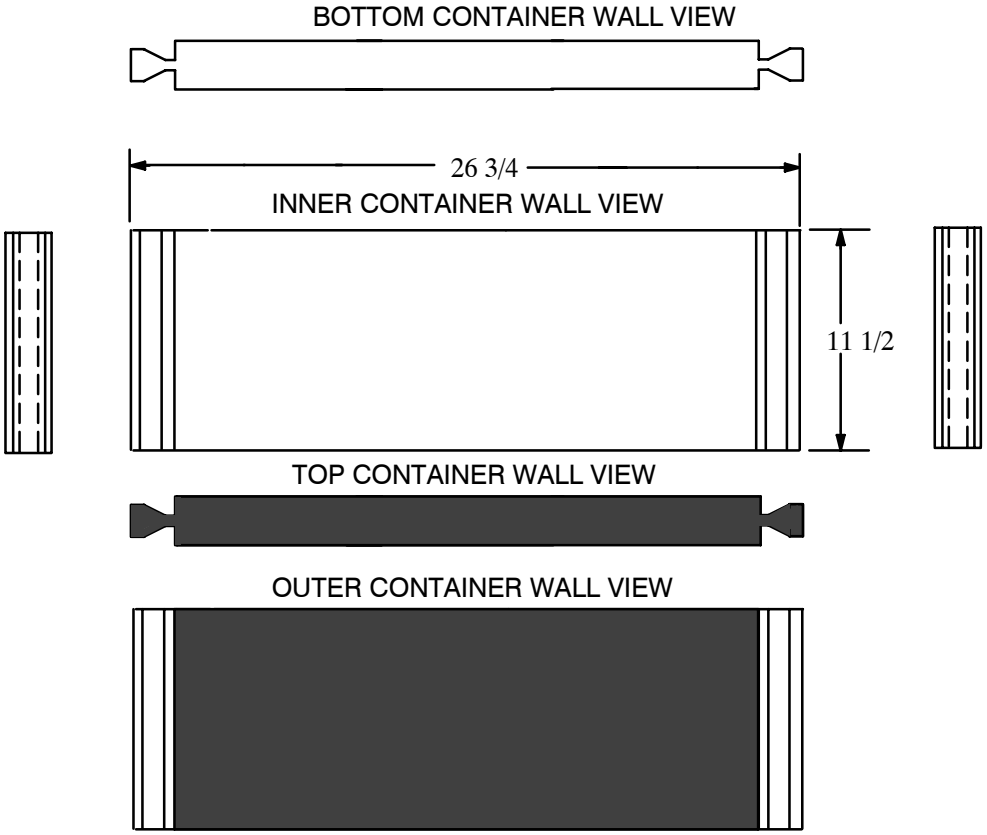
DRAWING NOT TO SCALE
FOR REFERENCE ONLY

NOTES:

THE CONTAINERS TOPS AND BOTTOMS CAN BE COATED BEFORE OR AFTER ASSEMBLY
INSIDE REFERS TO INSIDE SURFACE OF THE CONTAINER AFTER ASEMBLY
OUTSIDE REFERS TO THE OUTER SURFACE OF THE CONTAINER AFTER ASSEMBLY

COOLER SIDE

(2 Required)



FOR REFERENCE ONLY
DRAWING NOT TO SCALE

AREAS SHOWN LIKE THIS ARE NOT COATED

AREAS SHOWN LIKE THIS ARE COATED

NOTES:

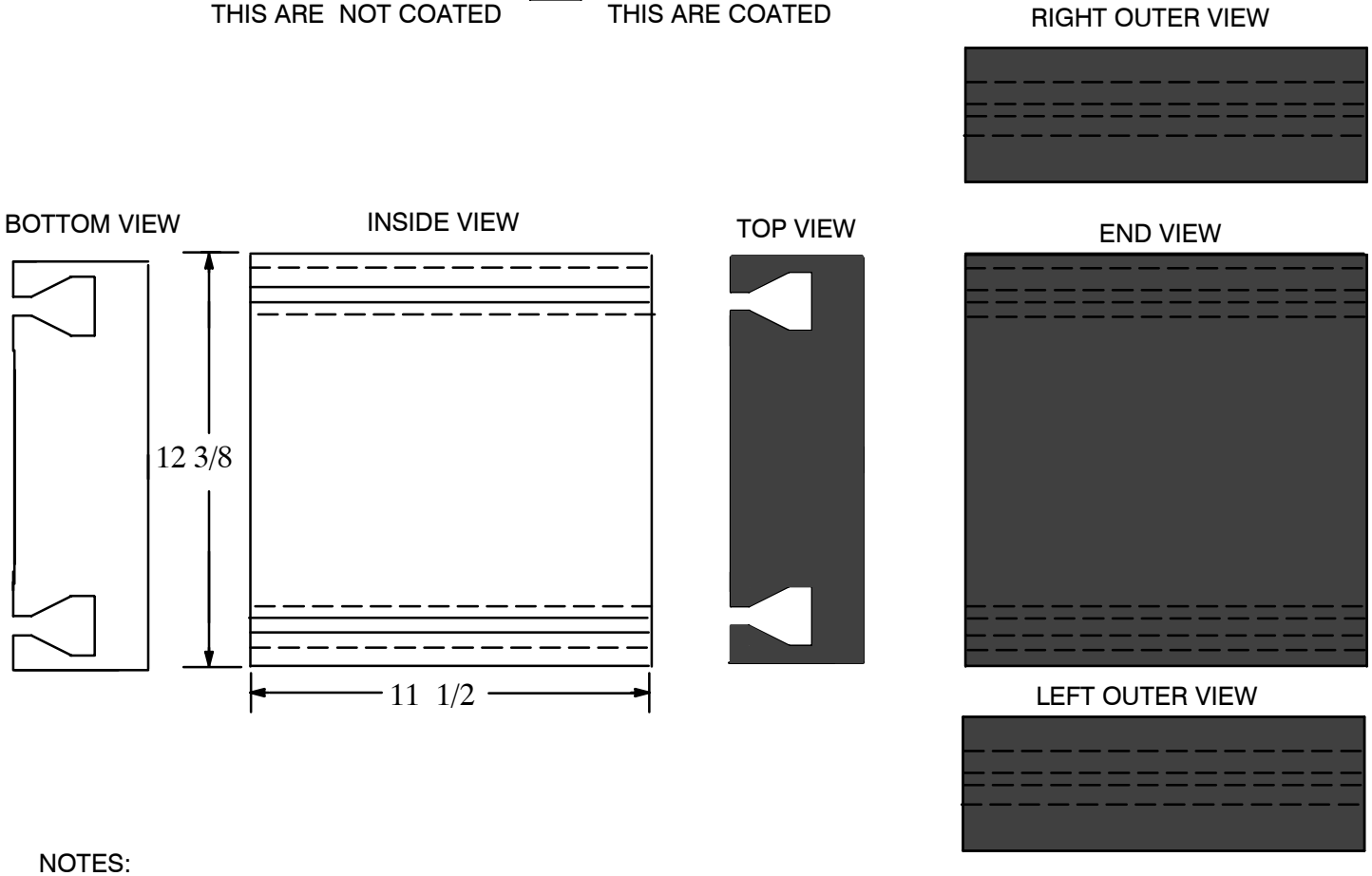
THE CONTAINER SIDES SHALL BE COATED AFTER ASSEMBLY
INSIDE REFERS TO INSIDE SURFACE OF THE CONTAINER AFTER ASEMBLY
OUTSIDE REFERS TO THE OUTER SURFACE OF THE CONTAINER AFTER ASSEMBLY

COATING APPLICATION AREAS OF THE COOLER ENDS

(2 Required)

AREAS SHOWN LIKE THIS ARE NOT COATED

AREAS SHOWN LIKE THIS ARE COATED



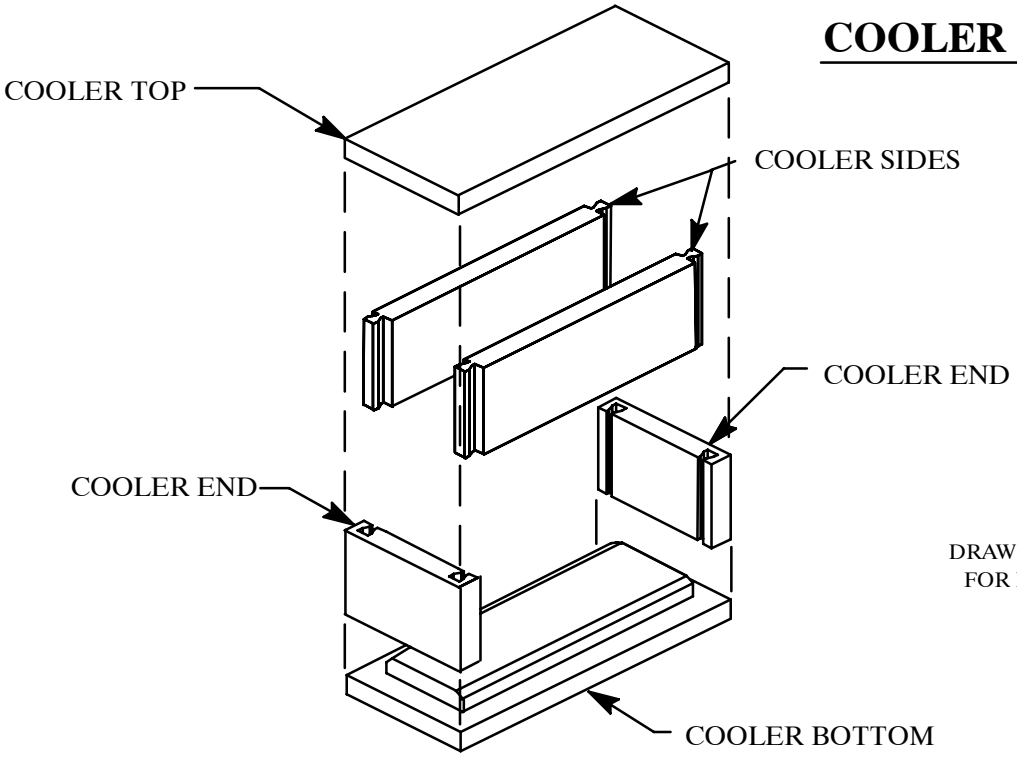
NOTES:

THE CONTAINER ENDS SHALL BE COATED AFTER ASSEMBLY
INSIDE REFERS TO INSIDE SURFACE OF THE CONTAINER AFTER ASEMBLY
OUTSIDE REFERS TO THE OUTER SURFACE OF THE CONTAINER AFTER ASSEMBLY

DRAWING NOT TO SCALE
FOR REFERENCE ONLY

(P) - Assemble the cooler pack as shown in this sketch.

COOLER PACK ASSEMBLY



DRAWING NOT TO SCALE
FOR REFERENCE ONLY

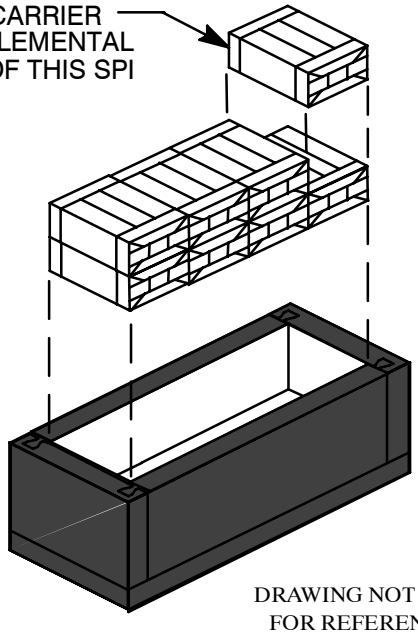
NOTE:
APPLY COMMERCIAL SILICON SEALANT (WHITE OR CLEAR IN COLOR) AT ALL INSIDE SEAMS OF CONTAINER DURING ASSEMBLY. TO INSURE A WATER PROOF SEAL. SEALANT SHALL NOT BE PLACED ON THE LID OF THE CONTAINER TO EFFECT A CLOSURE

PLACEMENT OF THE PACKED SUPPLEMENTAL CONTAINERS IN THE COOLER

ONE BOX ASSEMBLY CARRIER PACKED IN THE SUPPLEMENTAL CONTAINER, STEP 5 OF THIS SPI

Place eight Box Assembly, Carriers packed in their Supplemental container as shown in this sketch. There shall be two layers of 4 Box Assembly Carriers as shown.

Cooler top not shown for clarity.



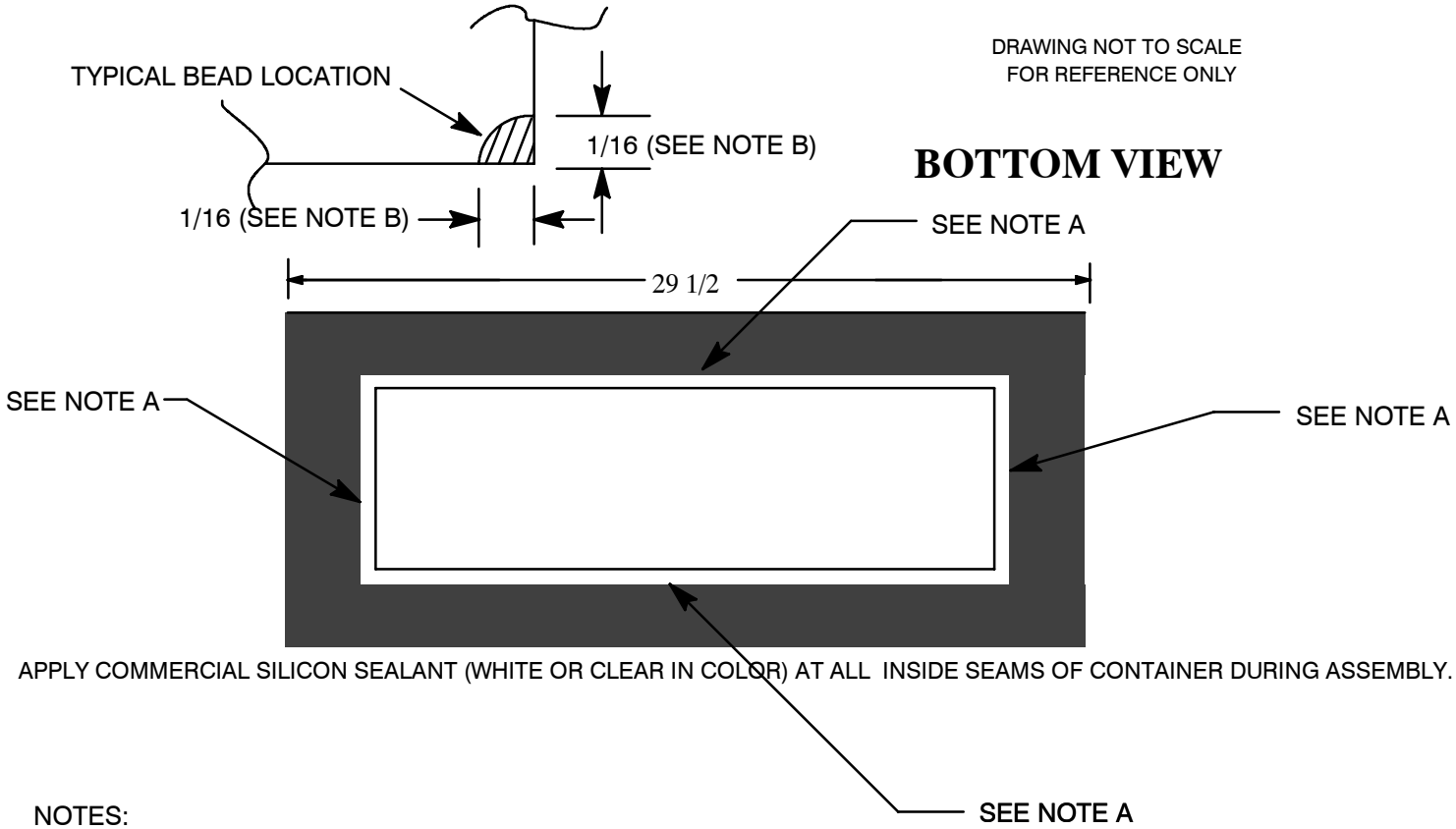
AREAS SHOWN LIKE THIS ARE COATED

AREAS SHOWN LIKE THIS ARE NOT COATED

DRAWING NOT TO SCALE FOR REFERENCE ONLY

(Q) – Exterior Shipping Container. The Cooler box shall serve as the exterior shipping container. Because the carrier assemblies need special environmental protection they shall not be shipped without the all packaging as specified on this SPI. Intermediate packing is not required.

PLACEMENT OF SEALING BEAD IN COOLER PACK LID



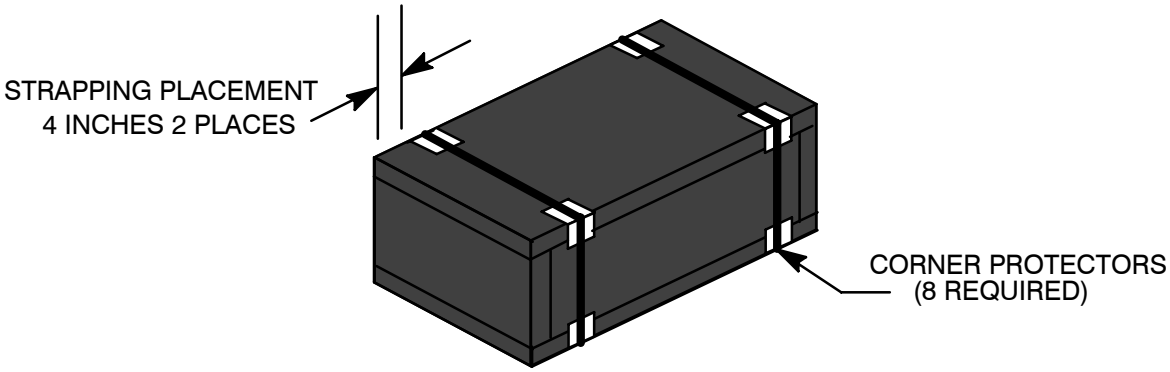
APPLY COMMERCIAL SILICON SEALANT (WHITE OR CLEAR IN COLOR) AT ALL INSIDE SEAMS OF CONTAINER DURING ASSEMBLY.

NOTES:

A. PRIOR TO PLACING THE LID IN PLACE, APPLY A BEAD OF CAULKING AROUND THE SEALING EDGE OF THE OF THE LID AS SHOWN. ALLOW THE BEAD TO CURE. FOLLOW THE CAULKING MANUFACTURES INSTRUCTIONS FOR THE APPLICATION OF THE CAULKING AND THE CURING TIME REQUIRED. THE CAULKING SHALL BE DRY AND SET BEFORE APPLYING THE LID TO THE BOX. THE CAULKING SHALL BE IN A COMMERCIAL SILICON SEALANT (WHITE OR CLEAR IN COLOR).

B. THE BEAD IS USED TO CREATE A SMALL INTERFERENCE FIT TO SEAL THE CONTAINER. MORE OR LESS BEAD MATERIAL IS AUTHORIZED AS LONG AS A SEAL IS ACCOMPLISHED UPON CLOSING.

COOLER BOX CLOSURE



Strapping of the Level A Shipping Container. Flat steel strapping shall be applied to the unit pack container as shown in the sketch above. Two straps are required. The strapping shall be placed as shown in the sketch above. Strapping shall be Type 1, Heavy Duty, Finish B, Grade 2, minimum 5/8 inches in width x 0.023 inches in thickness length as required. The metal seals shall be of the correct size, Heavy duty, Finish B, Grade 2, Style any. Both strapping and seals shall be in accordance with ASTM D 3953. Once tensioned, the steel strappings shall be secured with metal seals of the correct size to effect a strong closure.

DRAWING NOT TO SCALE
FOR REFERENCE ONLY

(R) – In addition to the marking requirements of MIL–STD–129 the following markings shall be applied to each carrier assembly fiberboard containers (step 6) :

a. Manufacture Date
b. Expiration Date
c. Lot Number
d. Shelf Life markings
e. Special Marking:

. **"PROTECT FROM FREEZING."**

In addition to the marking requirements of MIL–STD–129 the following markings shall be applied to the exterior shipping container:

a. Manufacture Date
b. Expiration Date
c. Lot Number
d. Shelf Life markings

e. Special marking

"PROTECT FROM FREEZING

TEMPERATURE SENSITIVE MATERIAL
EXPEDITE SHIPMENT AND MOVEMENT
APPLY TEMPERATURE CONTROL AT FINAL DESTINATION"

The additional special marking as shown in (Q) e. above, shall be marked in red print at least 48 point and placed on the marking side of the exterior shipping container. If there is not enough room on the marking side of the container. The label shall then placed on the top of the exterior shipping container.

(S) – PACKAGING QUALITY PERFORMANCE AND TESTING REQUIREMENTS

1. Classification of inspections. The inspection requirements for the packaged item described herein are classified as follows:
   (a) First article inspection
   (b) Conformance inspection
2. First Article inspection. The first article inspection and approval consists of the Contractor inspection of items prior to regular production.
   (a) Sampling. The first article packaging sample shall consist of not less than three unit pack containers and their contents, and when heat seal seam testing is required, three empty barrier bags. Packaged samples shall be taken from the quantity of first article sample items specified in QAP5–15–31917. Packaged samples shall be produced using the same methods, materials and equipment as will be used during regular production.
   (b) Examination. The packaged sample shall be examined in accordance with the visual preservation examinations (Table G–1) and the packing inspection examination procedures in Appendix G of MIL–STD–2073–1.
   (c) Leakage and heat seal seam tests. Sealed containers (in accordance with Method 41) shall be leak tested as specified in Appendix G of MIL–STD–2073–1. Sample barrier bags shall be destructively tested in accordance with the applicable heat seal seam test requirements in Appendix G of MIL–STD–2073–1. Testing of the barrier bag for Heat Seal Seam strength and leakage is required.
   (d) Acceptance criteria. First article samples that fail to comply with any of the applicable requirements shall be rejected.
3. Conformance Inspection.
   (a) Sampling. Sampling size shall be in accordance with the Attributes Sampling Plan Table of MIL–STD–1916. For examinations and leakage tests, Verification Level I shall be used. When heat seal seam tests are required, Verification Level II shall be used. Existing sampling plans in item specifications or quality assurance provisions shall take precedence.
4. Classification of characteristics. Quality conformance examinations and tests shall be as specified in Appendix G of MIL–STD–2073–1.

QUALITY ASSURANCE PROVISION (QAP)

1. COMMAND AGENCY:
U.S. ARMY SOLDIER AND BIOLOGICAL CHEMICAL COMMAND, SFAE-BD, ABERDEEN PROVING GROUND, MD 21010-5425

2. THIS QAP FORMS PART OF DRAWINGS 5-15-31917 - No Drawing, 5-15-19321 - 32011930 THROUGH 5-15-19327 - 32011937, and 5-15-19328 - 32014013, AS SPECIFIED IN THE CONTRACT. TEST AND INSPECTION SHALL BE CONDUCTED AS SPECIFIED HEREIN AND IN ACCORDANCE WITH REFERENCED DOCUMENTS.
NOTE: This QAP applies to two different configurations of immunoassay carriers. The two configurations include a "Snap Fit" assembly and an ultrasonically welded assembly.

3.

PART I. LIST OF APPLICABLE DOCUMENTS

DRAWINGS

Snap Fit		Welded	
5-15-31917	-	No Drawing	Box Assembly, Carrier
5-15-19321	-	32011930	Box Assembly, Carrier Assemblies
5-15-19322	-	32011931	Box, Carrier
5-15-19323	-	32011932	Carrier Assembly, Assay Strip
5-15-19324	-	32011933	Assay Strip Assembly
5-15-19325	-	32011935	Top, Assay Strip Carrier
5-15-19326	-	32011936	Membrane, Carrier Sample Well
5-15-19327	-	32011937	Bottom, Assay Strip Carrier
5-15-19328	-	32014013	Desiccant Strip

QUALITY ASSURANCE PROVISIONS
Hand Held Assay and JBPDS Carrier Conformance Test Plan

STANDARDS
MIL-STD-1916 ..... DoD Preferred Methods for Acceptance of Product
MIL-A-70625 ..... Automated Acceptance Inspection Equipment Design, Testing and Approval of
FED-STD-101 ..... Test Procedures for Packaging Materials

SPECIFICATIONS
P5-15-193197-10 through -60 and P5-15-31917 Special Packaging Instruction (SPI), PAR Carrier Assembly Operational

NON-GOVERNMENT PUBLICATIONS
JBPDS Carrier Debris Inspection Criteria [The contractor is to submit these criteria to the government for approval]
ISO 10012 ..... Measurement management systems — Requirements for measurement processes and measuring equipment

PART II. CONFORMANCE PROVISIONS

1. General provisions.

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

4. RELEASE NUMBER	A							
5. DATE								
4. RELEASE NUMBER								
5. DATE								

REVISION	6. REVISION	A	A	A	A	A	A	A	A	A	A	A			
STATUS	7. SHEET	1	2	3	4	5	6	7	8	9	10	11			
OF	6. REVISION														
SHEETS	7. SHEET														

8. QAP FOR: **JBPDS Assay Strip Assembly, Carrier Assembly, Box Assembly and Components**	LEAVE BLANK	9. CAGE CODE **81361**
9. SUBMITTED BY **PM-JBPDS (SIGNATURE) M. Allman**		10. QAP NO.: **5-15-31917**

11. DATE:	12. APPROVED:	13. RELEASE NO.	14. PAGE NO.	15. NO. OF PAGES:
31-Oct-07	James Szachta, Production Team Leader	**A**	1	10

QUALITY ASSURANCE PROVISION (QAP)

3.

1.1. Classification of characteristics. There are three classes of characteristics covered in this QAP. These are: critical characteristics, major characteristics, and minor characteristics, as defined in MIL-STD-1916.

1.2. Workmanship. General visual inspection criteria.

1.2.1. Refer to 5-15-19324 - 32011933. Assay strip assemblies shall be free of dirt, extraneous markings, excess adhesive, and loose fibers. Make sure assay strip assembly components do not delaminate after being cut to size, and that specific code descriptions are legible.

1.2.2. Refer to 5-15-19323 - 32011932. Assay strips shall be positioned within the carrier assembly housing such that the sample pad (fluid well end) is against the lower stop, and completely covers the bottom of the fluid well. Assay strips shall be flat and free of wrinkles, bends, loose fibers, and stray marks. The carrier assembly top plastic shall be completely clean and free of stray marks.

1.2.3. Refer to 5-15-19321 - 32011930. Box assemblies shall be loaded with the proper carrier assemblies and the box marking shall be legible and accurately identify the installed carrier assembly configuration.

1.3. Certification provisions.

1.3.1. Conformance Test Reports (CTR). The contractor shall make available to the Government a CTR - from a certified conformance test laboratory - for each lot of assay strip assemblies and carrier assemblies, by lot number, prior to acceptance. This test report is in addition to, and not in lieu of, any rights of the Government under this contract or law. A CTR may be used as an element incident to, but shall not be used as the sole basis for, Government acceptance of the contract item(s) unless so indicated in the technical documentation or contract. As a minimum, the report shall contain the following:

a. Name of company and date.
b. Contract number or purchase order number, national stock number and drawing number.
c. Complete nomenclature of supplies together with lot number or other identification. The quantity in each lot or shipment shall be given.
d. All inspections and tests required by contract (i.e., material, processes, performance, functional, etc.) shall be recorded in test reports. These reports shall identify each lot submitted for acceptance by lot number, the specification or drawing, revision and date, grade or type as applicable, number of specimens tested, specified characteristics and requirements, and actual results obtained. Specifically: Date the assay strips were tested, technician name(s) performing the tests, pertinent assay identifiers (including lot number and assay type), dilution buffer date and antigens used for test, and scanner values and visual score of the assay strip test and control lines.
e. A statement, as follows, certifying that material meets all requirements of the contract:
"The undersigned, individually, and as the authorized representative of the contractor, warrants and represents that: All the information supplied above is true and

3.

accurate; the material covered by this certificate conforms to all contract requirements (including but not limited to the drawings and specifications); the inspection and test results, and the analysis appearing herein are true and accurate."

f. Signature and title of certifying official.

1.3.2. Certificate of Conformance (COC). A certificate of conformance is required for each lot of carrier assembly box assemblies, supported by inspection and test data, and shall be made available to the Government. The contractor shall make the COC available to the Government prior to or with the request to perform acceptance inspection approval by the Government. This is in addition to, and not in lieu of, any rights of the Government under this contract or law. A COC may be used as an element incident to, but shall not be used as the sole basis for, Government acceptance of contract item(s) unless so indicated in the technical documentation or contract. As a minimum, the COC shall contain the following:

a. Name of company and date.

b. Contract number or purchase order number, national stock number and drawing number.

c. Complete nomenclature of supplies together with lot number or other identification. The quantity in each lot or shipment shall be given.

d. A statement, as follows, certifying that material meets all requirements of the contract:
"The undersigned, individually, and as the authorized representative of the contractor, warrants and represents that: All the information supplied above is true and accurate; the material covered by this certificate conforms to all contract requirements (including but not limited to the drawings and specifications); the analyses appearing herein are true and accurate analyses; and this certificate is made for the purpose of inducing payment and with knowledge that the information and certification may be used as a basis for such payment."

e. Signature and title of certifying official.

2. First Article.

2.1. Strip Submission. Unless otherwise specified, a first article sample consisting of assay strip samples - in quantities as specified in the Conformance Test Plan - shall be submitted for test of each lot of assay strips produced. The sample assay strips will be subjected to any or all of the conformance tests and may also be inspected for compliance with any or all of the requirements of this QAP, applicable drawing(s), and specification(s). The certification requirements of Part IV apply.

2.2. Carrier Submission. Unless otherwise specified, a first article sample consisting of the sample items in quantities as specified below shall be submitted for inspection and approval in accordance with the terms of the contract. The sample items will be subjected to all the conformance inspections listed in Part III of this QAP and may be inspected for compliance to any or all of the requirements of the applicable drawing(s) and specification(s). The samples will be assembled the greatest number of permutations practicable given the designated lot size. The certification requirements of Part IV apply.

Sample Items	Drawings	Sample Quantity
Carrier Assembly	5-15-19323 -	150 (loaded into

QUALITY ASSURANCE PROVISION (QAP)

3.

Sample Items	Drawings	Sample Quantity
	32011932	boxes below)
Box Assembly, Carrier Assemblies	5-15-19321 - 32011930	10 (carriers above installed)
Box Assembly, Carrier	5-15-31917 - No Drawing	As noted in SPI P5-15-193197-10 through -60 and P5-15-31917

2.3. Components. An inspection of each component used to assemble the items in paragraph 2.2 shall be included with the first article inspection report. The inspection report will include inspection results of each specified characteristic for the items manufactured. The inspection results are to include, at a minimum, the characteristic, the actual results (numeric when practicable), the date of the inspection, the name (or other identification) of the person performing the inspection and the signature of the inspector(s). In the event that the test is destructive, an equivalent number of samples are to be randomly drawn from the lot of components used to manufacture the First Article samples. In the event components are manufactured from multiple tooling sets (e.g. cavities) the samples measured are to be equally distributed amongst the tooling sets.

2.4. Rejection. If any sample item fails to comply with any of the applicable requirements, the first article sample shall be rejected. The Government reserves the right to terminate inspection upon any failure to comply with any of the requirements.

3. Verification. Verification inspection shall consist of inspection of each conformance characteristic contained in Part III, Inspection Requirements, and Part IV, Certification Provisions, of this QAP. Failure to comply with the conformance criteria specified shall be cause for rejection of the lot or quantity represented. All other characteristics of the box assembly and components thereof which are not specifically listed herein are subjected to control under the contractor's quality program or inspection system.

3.1. Lot formation. Lots shall consist of each unique combination of assay strip lots. At each change in assay strip lot the contractor shall assign a new lot identification. The contractor shall also record the lot numbers of the other components used in each lot of carriers produced.

3.2. Attributes Sampling Inspection. The provisions/procedures of MIL-STD-1916 are applicable to this QAP unless otherwise specified. Attributes sampling for the conformance characteristics listed in Part III herein shall be in accordance with MIL-STD-1916, Table II, using the verification level cited in the conformance criteria columns of Part III. The procedure in MIL-STD-1916 for normal inspection shall be used at the start of production for current or previous suppliers of the item. For all new suppliers of the item, tightened inspection shall be used at the start of production and be continued until the criteria for normal inspection are met.

3.3. Alternative Verification Provisions. Unless otherwise specified, alternative verification provisions, such as statistical process control (preferred), variables or continuous sampling plans, may be used by the contractor in lieu of the inspection provisions contained herein when such alternative(s) provide an equivalent or better level

3.

of quality, and provided they have been described in a written proposal which has been approved by the Government.

3.4. Inspection equipment. Unless otherwise specified herein or the contract, all inspection equipment required to perform the examinations and tests in this QAP shall be designed, documented and maintained by the contractor using ISO 10012 and MIL-A-70625 (as applicable) as guidance, including any fixtures necessary to accommodate the test procedures. Inspection equipment shall incorporate the appropriate measurement capability, precision and accuracy to assure rejection of nonconforming product. Equivalent inspection equipment standards may be accepted when such alternative(s) provide an equivalent or better level of quality, and provided they have been described in a written proposal, which has been approved by the Government.

3.5. Components and assemblies. The following components shall conform to the requirements of their respective drawings prior to their installation in the box assembly (5-15-19321 - 32011930) and subsequent packaging into the final configuration (5-15-31917 - No Drawing):

Name	Drawing
Desiccant Strip	5-15-19328 - 32014013
Bottom Assay Strip Carrier	5-15-19327 - 32011937
Membrane, Carrier Sample Well	5-15-19326 - 32011936
Top, Assay Strip Carrier	5-15-19325 - 32011935
Assay Strip Assembly	5-15-19324 - 32011933
Carrier Assembly, Assay Strip	5-15-19323 - 32011932
Box, Carrier	5-15-19322 - 32011931

Part III. INSPECTION REQUIREMENTS

1. Classification of Conformance Characteristics.

a. Box Assembly Carrier. Drawing 5-15-31917 - No Drawing

Class	Characteristic	Conformance Criteria	Inspection Method
Critical			
101	Storage, Temperature	100%	Automated Monitoring System with Recorder and Alarm [1]
102	Storage, Humidity	100%	Automated Monitoring System with Recorder and Alarm [1]
103	Packaging	See P5-15-193197-10 through -60 and P5-15-31917.	
104	Stability (Shelf Life)	Sample every 6 months[2]	See 502

b. Box Assembly, Carrier Assemblies Drawing 5-15-19321 - 32011930

Class	Characteristic	Conformance Criteria	Inspection Method

QUALITY ASSURANCE PROVISION (QAP)

3.

Class	Characteristic	Conformance Criteria	Inspection Method
Critical			
101	Identification Markings	100%	Visual
102	Storage, Temperature	100%	Automated Monitoring System with Recorder and Alarm [1]
103	Storage, Humidity	100%	Automated Monitoring System with Recorder and Alarm [1]
104	Date of Manufacture matches oldest strip lot DOM	Level III	Visual
Major			
201	Qty (15) carriers installed	100%	Visual
202	Carrier code matches marking on rear of box	Level IV	Visual
203	Carriers right side up	Level III	Visual
204	Carrier snap fit	Level II	Visual
205	Carrier free from contaminates	100%	Visual[3]
206	Carrier free from smudges, scratches & fingerprint	100%	Visual
Minor			
301	Workmanship	Level I	Visual
302	Box is correct color[4]	Level I	Visual

c. Box, Carrier. Drawing 5-15-19322 - 32011931

Class	Characteristic	Conformance Criteria	Inspection Method
Critical			
None			
Major			
201	Flatness within tolerance (Note 3)	Level III	Measure
202	Color[4]	Level III	Visual
203	Rear Lock Height, 30X 0.030 +0.002 -0	Level III	Measure
Minor			
301	Workmanship	Level I	Visual
302	Material	Certificate of Conformance per Lot 1st Article, 100,000 shots and Tool Change[5]	Visual
303	All Other Dimensions		Measure

8. QAP FOR: **JBPDS Assay Strip Assembly, Carrier Assembly, Box Assembly and Components**					LEAVE BLANK	9. CAGE CODE **81361**
16. REVISION SYMBOL AND DATE	**A**					10. QAP NO. **5-15-31917**
	05 MAY '03					14. PAGE NO. 6

QUALITY ASSURANCE PROVISION (QAP)

3.

d. Carrier Assembly, Assay Strip. Drawing 5-15-19323 - 32011932

Class	Characteristic	Conformance Criteria	Inspection Method
Critical			
101	Assay strip performance	See 502	See 502
102	Identification Markings	100%	Visual
Major			
201	No contamination	100%	Visual[3]
201	No contamination	Level IV	JBPDS Identifier
202	Strip code descriptions visible	100%	Visual
203	Marking matches code descriptions	100%	Visual
204	Desiccant strips visible	Level II	Visual
205	Flatness	Level II	Measure
206	No bubbles/creases/wrinkles in sample well membrane	Level II	Visual
207	Overall Height 0.170±0.005	100%	Plate and Indicator
208	Color of Bottom Assay Carrier Assay Strip[4]	Level III	Visual
209	Membrane Location	Level II	Visual
210	Storage, Temperature	100%	Automated Monitoring System with Recorder and Alarm [1]
211	Storage, Humidity	100%	Automated Monitoring System with Recorder and Alarm [1]
212	Humidity Exposure During Assy. (> 40% RH for 8 hrs. maximum)	100%	Tracking with exposure log
Minor			
301	Workmanship	Level I	Visual

e. Assay Strip Assembly. Drawing 5-15-19324 - 32011933

Class	Characteristic	Conformance Criteria	Inspection Method
Critical			
101	Test Line Performance	See 501	See 501
102	Control Line Performance	See 501	See 501
103	Code Descriptions Correct	Level IV	Visual
Major			
201	Free of visible contamination	100%	Visual[3]
202	Code description visible	Level II	Visual
203	No delaminating components	Level II	Visual
204	All other dimensions	Level II	Measure

8. QAP FOR: **JBPDS Assay Strip Assembly, Carrier Assembly, Box Assembly and Components**					LEAVE BLANK	9. CAGE CODE **81361**
16. REVISION SYMBOL AND DATE	**A**					10. QAP NO. **5-15-31917**
	05 MAY '03					14. PAGE NO. 7

QUALITY ASSURANCE PROVISION (QAP)

3.

Class	Characteristic	Conformance Criteria	Inspection Method
			Automated Monitoring System with Recorder and
205	Manufacturing area Relative Humidity (RH)	100%	Alarm [1]
206	Humidity Exposure	100%	Exposure Log
			Automated Monitoring System with Recorder and
207	Storage Humidity	100%	Alarm [1]
			Automated Monitoring System with Recorder and
223	Storage Temperature	100%	Alarm [1]
224	Base Material Optical Density	Level IV	Measure
Minor			
301	Workmanship	Level II	Visual
302	Proper packaging identification	Level II	Visual
303	No bent/wrinkled strips in multiple strip packages	Level II	Visual

f. Top, Assay Strip Carrier. Drawing 5-15-19325 - 32011935

Class	Characteristic	Conformance Criteria	Inspection Method
Critical			
None			
Major			
201	Free of visible contamination	100%	Visual[3]
202	No scratches or stray marks	100%	Visual
203	Within dimensional tolerance	Level II	Measure
204	Warp/bend that would prevent assembly	Level III	Visual
Minor			
301	Workmanship	Level II	Visual
302	Proper packaging identification	Level II	Visual

g. Membrane, Carrier Sample Well. Drawing 5-15-19326 - 32011936

Class	Characteristic	Conformance Criteria	Inspection Method
Critical			
None			
Major			
201	Free of visible contamination	100%	Visual[3]

QUALITY ASSURANCE PROVISION (QAP)

3.

Class	Characteristic	Conformance Criteria	Inspection Method
	Correct material		
202	specification	100%	C of C (1.3.2)
203	Width 0.750 +0.010 -0	Level IV	Optical Comparator
204	Length 4.492 +0.010 -0	Level IV	Optical Comparator
Minor			
	None		

h. Bottom, Assay Strip Carrier. Drawing 5-15-19327 - 32011937

Class	Characteristic	Conformance Criteria	Inspection Method
Critical			
	None		
Major			
201	Free of visible contamination	100%	Visual
202	Within dimensional tolerance	Level II	Measure
203	Flatness within tolerance	Level II	Measure
204	Color	Level II	Visual
Minor			
301	Workmanship	Level II	Visual
302	Proper packaging	Level II	Visual
303	Correct identification	Level II	Visual

i. Desiccant Strip. Drawing 5-15-19328 - 32014013

Class	Characteristic	Conformance Criteria	Inspection Method
Critical			
	None		
Major			
	Correct material		
201	specification	100%	C of C (1.3.2)
	Desiccant not exposed /		
202	spoiled	Level I	Color
203	Mass 75g ± 10%	Level I	Balance
204	Length 3.99 ± 0.21	Level II	Caliper
205	Width 0.63 ± 0.03	Level II	Caliper
206	Height 0.085 max	Level II	Plate & Indicator
Minor			
301	Packs not torn or damaged	Level II	Visual
	Proper packaging		
302	identification	Level II	Visual

2. Special sampling inspection.

8. QAP FOR: **JBPDS Assay Strip Assembly, Carrier Assembly, Box Assembly and Components**					LEAVE BLANK	9. CAGE CODE **81361**
16. REVISION SYMBOL AND DATE	**A**					10. QAP NO. **5-15-31917**
	05 MAY '03					14. PAGE NO. 9

QUALITY ASSURANCE PROVISION (QAP)

3.

301. Assay Strip Assembly Conformance. This test shall be conducted as specified in Part V, 501. The items to be tested shall be representative of the items processed (i.e., distributed randomly and processed concurrently with the production items). Destructive test.

302. Carrier Assembly Conformance. This test shall be conducted as specified in Part V, 502. The items to be tested shall be representative of the items processed (i.e., distributed randomly and processed concurrently with the production items). Destructive test.

PART IV. CERTIFICATION REQUIREMENTS

Certified Test Reports (CTRs) in compliance with paragraph 1.3.1, or Certificates of Conformance (COCs) in compliance with paragraph 1.3.2, are required for the following:

NUMBER	CHARACTERISTIC	CERTIFICATION METHOD	TEST DATA TO COMPLY WITH
401	Assay Strip Performance	CTR	Hand Held Assay and JBPDS Carrier Conformance Test Plan
402	Carrier Assembly Performance	CTR	Hand Held Assay and JBPDS Carrier Conformance Test Plan
403	Membrane Material	COC	DWG. 5-15-19326 - 32011936
404	Desiccant Strip Material	COC	DWG. 5-15-19328 - 32014013

PART V. TEST METHODS AND PROCEDURES

501. Assay Strip Assembly Testing. This test shall be conducted in accordance with the Hand Held Assay and JBPDS Carrier Conformance Test Plan .

502. Carrier Assembly Testing. Samples of completed carrier assemblies with assay strips installed shall be tested in accordance with the Hand Held Assay and JBPDS Carrier Conformance Test Plan .

---

[1] In the event of a power failure and or loss of environmental control, the alarm shall sound and continue to alarm until reset with human intervention, even after power has been restored and environmental conditions reacquired. The time between when environmental conditions are recorded shall not exceed fifteen (15) minutes.

[2] Retain samples from each lot for stability testing every six months until the expiration date of the lot. Sample sizes for each test every six months to be in accordance with ANSI Z1.4, inspection level S-2 with an AQL of 1.0.

[3] The contractor shall submit for government approval, the visual inspection criteria.

[4] Applies to Snap Fit carriers only

[5] Samples to be 10 consecutive pieces per cavity at start of work, after every 100,000 pieces, or change to tool mold surfaces. This excludes changes to ejector pins.